



REGISTERED AS A NEWSPAPER

TELEPHONE: CENTRAL 3617
TELEGRAMS: "CHEMICUS,"
CANNON, LONDON (2 Words)

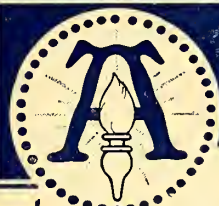
PUBLISHED WEEKLY AT 42 CANNON ST., LONDON, E.C.4.

SUBSCRIPTION WITH
DIARY 20/- PER ANNUM
SINGLE COPIES 9d.

No. 2433.

SEPTEMBER 25, 1926.

Vol. CV.



Trade
Mark

"Torch" Brand EXTRACT OF MALT with COD-LIVER OIL

Sell on quality—it is a better policy than price-cutting. "Torch" Brand Cod Liver Oil and Malt Extract is unsurpassed in quality and packing; it also carries the name and guarantee of Allen & Hanburys Ltd. The prices are protected on a basis that gives satisfaction all round.

"Torch" Brand Products are supplied to Chemists only

*A fair Profit
to the Retailer.*

□ □ □

*A fair Price
to the Public.*

□ □ □

We help sales by supplying artistic 6 page folders for distribution and material for an attractive Window Display.



P.A.T.A. Prices

Size lb.	Wholesale per doz.	Retail each
$\frac{1}{2}$	7/7 $\frac{1}{2}$	11d.
1	11/6	1/4
2	20/6	2/6
4	38/6	4/9
7	64/9	8/-

□ □ □

SPECIAL QUOTATIONS
FOR
LARGE QUANTITIES.

Allen & Hanburys Ltd., Bethnal Green, London, E.2

THE MORNY TALCUM POWDERS

Perfumed



“CHAMINADE”
 “FANTASIE”
 “JUNE ROSES”
 “LA VALSE”
 “MYSTÉRIEUSE”
 “NOCTURNE”
 “NUIT de CARNAVAL”
 “SÉRÉNADE”
 “VIOLETTE-MORNY”
 “YESHA”



Minimum Retail Prices:

Sprinkler Tins 1/6

Frosted Glass Bottles 2/6

(with Gilt Metal Sprinkler)

Subject to usual trade terms.

ELEGANTLY PRESENTED & EXQUISITELY PERFUMED

In Outers of Six for Counter Display.

The Morny Fine Perfumery Products are an adornment to the Highest Class Retail Establishment and attract the best type of Customer.

Apply for full Price List and Terms to—

**MORNY FRÈRES, 6 NEW BURLINGTON
 LIMITED, STREET, LONDON, W.1**

Our
new winter line

COLTSFOOT COUGH CANDY

(Chemist's Quality.)

is so amazingly good to the taste, you are apt to forget it is a real do-good-cough-remedy, made with Aniseed, Coltsfoot and Raspberry Vinegar. You only need to have the display in your window for a week to prove that

"THE WIGGLESWORTH WAY"

knows the taste and the pocket of the public—and how to get the business.

Low selling price, usual healthy profit.

— *Sample waiting for your P.C.* —

WIGGLESWORTH
— LIMITED —
WESTHOUGHTON
— LANCs. —



EMULSION
OF FINEST NORWEGIAN
COD LIVER OIL
33%
WITH THE HYPOPHOSPHITES OF CALCIUM & SODIUM

EACH FLUID OUNCE (28.5 c.c.) CONTAINS:
Cod Liver Oil.....160 mins. (9.5 c.c.)
Calcium Hypophosphite.....8 grs. (0.5 gm.)
Sodium Hypophosphite.....4 grs. (0.25 gm.)
This emulsion is distinguished by its palatability, digestibility, elegance and permanence. Miscible in all proportions with water, wine, or milk.

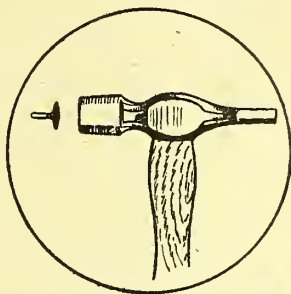
DOSE:—One to four teaspoonfuls (4 to 16 c.c.) with, before, or after meals. SHAKE WELL BEFORE USING

PARKE, DAVIS & CO.
LONDON

	5oz.	8oz.	16oz.
M.R.P.	1/8 ea.	2/6 ea.	4/6 ea.
M.W.P.	14/2	20/8	36/9
	net per doz.		

Cod-Liver Oil Emulsion, 33%
PARKE, DAVIS & CO.

YOU can do good business with this emulsion during the coming winter. It is a dependable, palatable and permanent product, with a guaranteed content of the finest cod-liver oil of assured vitamin activity. Moreover, it is profitable—particularly so if bought on the best terms, which will be sent, together with particulars of how we can assist sales, to pharmacists on application.



The Hammer and the Nail

The process of driving a nail is illustrative of the process of effecting the sale of a manufactured product. We, as the makers of

Roboleine

THE FOOD THAT BUILDS THE BODY

expend much thought and a great deal of money on the initial and intermediate stages of driving the sales-argument into the minds of the people. But the last hit on the head of the 'nail' is something which only you can do. So if you will put forth that final effort to drive the nail home, you will send up your sales in a remarkable manner. Stock, display and recommend 'Roboleine.'

OPPENHEIMER, SON & COMPANY LTD.
179 Queen Victoria Street, London E.C. 4.



O & S



The Choice of Careful Buyers

ONLY fresh plants grown on the Company's farms in Suffolk are used for the preparation of "StaffAllenS" Green Extracts. Because of their consistently high standard of quality they are invariably the choice of careful buyers. Ext. Belladonnæ Viride P.B. 1898, Ext. Hyoscyami Viride P.B. 1898, Ext. Hyoscyami 1st year. Write for prices. Stafford Allen & Sons, Ltd., Manufacturing Chemists, London.

"StaffAllenS"

GREEN EXTRACTS



INDEX TO ADVERTISERS

Acoustic Supply Co., Ltd. (Aids for the Deaf)	xxiv	Butler, E. H., & Son (Synthetic Ottos, &c.)	20	Fuller, R. L., & Co., Ltd. (Quinine Salts)	iv
Allen & Hanburys, Ltd. (Cod Liver Oil and Malt)	Cover	Carnegie Bros. (Surgical Dressings) ..	ix	Galjado Perfumery Co., Ltd. (Toilet Preps.)	20
Allen, Stafford, & Sons, Ltd. (Green Extracts)	4	Castle Huskisson, Ltd. (Tablets and Pills)	x	Gambles, J. C., & Co., Ltd. (Toilet Preps.)	54
Allwood Bros. (Perfumery)	20	Cataline Co. (Veterinary Medicines) ..	xxvi	Gardner, W., & Sons (Glos.), Ltd. (Machinery)	46
Anglo-American Oil Co., Ltd. ("Specialty" Liquid Paraffin)	7	Cavendish Chemical Corporation	xii	Genoxide, Ltd. (Peroxide)	9
Anglo-French Drug Co., Ltd.	xv	Chemical Works, Roermond (Ess. Oils) ..	21	George, Ernest J. (Valuer, &c.) Col. Supp.	x
Arnfield, J. C., & Sons, Ltd. (Raspberry Vinegar)	xv	Christy, T., & Co. (Py-shan Points Tea, Zepto Tooth Pencils)	54-56	Gibbins, R., & Co. (Tablets)	x
Ashton & Parsons, Ltd. (Phosferine) ..	xxvii	Clark, Cicero S. (Cachets)	xxii	Goodall, Backhouse & Co. (Olive and Salad Oils, &c.)	xxi
Assoc. of Manfg. Chsts., Ltd. Col. Supp.	48	Cocoa Mills, Wessanen	xiii	Gordon, H. (London), Ltd. ("Gordonia" Feeder, &c.)	34
Ayrlton-Graham, Ltd. (Shopfittings) ..	Col. Supp.	Coleman & Co., Ltd. (Wincarnis) ..	13	Gough, Kidston & Co. (Petroleum Jelly, &c.)	39
Bandoeng Quinine Factories	xiii	Corigliano Liquorice	xi	Gower, J. (Books)	Col. Supp.
Barradell, J. T. (Chamois, Sponges) ..	28	Corrugated Packing Materials Co., Ltd. (Corrugated Paper Boxes, &c.) ..	50	Grout & Co., Ltd. (Crêpe Bandages) ..	34
Bates, F. W. (Toilet Preps.)	54	Cowen, E., & Co. ("Darling" Lanoline)	Leader Page	Guest, T., & Co., Ltd. (Throat Tablets, &c.)	44
Bath and West of England College ..	xxiv	Cresswell Bros., Branch Intl. Sponge Importers, Ltd. (Sponges)	26	Haller Laboratories, Ltd. (Danysz Virus)	xxvi
Battle, Hayward & Bower (Weed Killers, &c.)	52	Darwins, Ltd. (Safety Razor Blades) ..	10	Haller & Phillips, Ltd. (Glycerine) ..	iv
Bayer Products, Ltd.	56	Davenport, J. T., Ltd. (Chlorodyne) ..	xix	Harding, Holland & Fry, Ltd. (Petroleum Oils)	39
Beaton, Clark & Co., Ltd. (Bottles) ..	43	DeVilbiss Co. (Sprays, &c.)	28	Harris, J., & Co. (Surgical Rubber Goods)	32
Beecham, Thomas (Pills)	xx	Dearborn (1925), Ltd. (Toilet Specialities)	22	Harrison, A., & Sons (Printing)	50
Beltona, Ltd. (Rheumatic Lotion) ..	xviii	Dee Oil Co., Ltd. (Petroleum Jelly) ..	40	Harvey & Co. (Dublin), Ltd. (Veterinary)	xxvi
Benger's Food, Ltd. (Foods)	56	Deshell Laboratories, Ltd. (Petro-lagar)	xiv	Haywood, J. H., Ltd. (Surg. App.) ..	32
Bennett, Sons & Shears, Ltd. (Machinery)	48	Dick, W. B., & Co., Ltd. (Liquid Paraffin)	38	Heathman (Ladders, &c.)	52
Berdoo & Fish (Valuers, &c.) Col. Supp.		Dorin, Ltd. (Beauty Preps.)	21	Hedley, T. A. (Agencies)	xiii
Berk, F. W., & Co., Ltd. (Chemicals) ..	vii	Dubarry et Cie (Xmas Displays) ..	Cover	Henry, A. C. (Chemicals)	v
Blackie, Robert (Winter Lines)	xx	Edge, W., & Sons, Ltd. (Drummer Dyes)	29	Henry, T. & W. (Calcined Magnesia) ..	vi
Blyton, Astley & Co. (Menthalls, &c.) ..	xvii	Edme, Ltd. (Malt Extract)	53	Howard, R. H., Co. (Surgical Goods) ..	35
Boake, A., Roberts & Co., Ltd. (Aromatic Chemicals, &c.) ..	Leader Page	Edwards Harlene, Ltd. (Hair Preps.) ..	25	Hill, Wm., & Co. (Proprietaries) ..	28
Boehm, Fredk., Ltd. (Cod Liver Oil) ..	16	Endocrines, Ltd. ("Harrower" Preps.) ..	xvi	Hindes, Ltd. (Hair Brushes)	24
Borax Consolidated, Ltd.	vi	Evans Sons Lescher & Webb, Ltd. (Throat Pastilles)	xix	Hollandische Melksuikerfabriek	x
Bow's Liniment, Dr., Ltd.	xxii	Fairchild Bros. & Foster ("Holadin") ..	Leader Page	Horlick's Malted Milk Co., Ltd.	16
Boxfoldia, Ltd. (Cartons, &c.)	46	Fairy Dyes, Ltd. (Home Dyes)	52	Hornby & Co. (Tin Canisters)	42
Brand & Co., Ltd. (Foods)	12	Farley, A., Ltd. (Shopfittings)	54-Col. Supp.	Hovenden, R., & Sons, Ltd. (Lloyds Euxesis)	20
Braun, H. W. (Pharmaceutical Specialities)	xiii	Farmer, F., & Co. (Rat Poison)	48	Howards & Sons, Ltd. (Aspirin Tablets)	i
Brett & Co.	Col. Supp.	Fassett & Johnson, Ltd. (Sloan's Liniment)	37	Hubbuck, T., & Son, Ltd. (Oxide of Zinc)	viii
Brewsters (Overalls)	xxv	Fellows' Medical Manfg. Co., Inc. (Fellows' Syrup)	xii	Hunts, Ltd. (Stone Jars)	42
British Diamalt Co. (Extract of Malt)	12	Fielding & Co., Ltd. (Sleeka)	29	Iglodine Co., Ltd. (Iglodine)	xii
British Goodrich Rubber Co., Ltd. (Rubber Sundries)	33	Fink, F., & Co. (Gums)	54	Illingworth, T., & Co., Ltd. (Roll Films, &c.)	xxv
Brown & Son (Stills)	46	Folkes, F. W., & Co. (Crêpe Bandages)	30	Ingram & Royle, Ltd. (Mineral Waters)	8
Bruce, Dawson & Co. (Bottle Caps) ..	42	Ford, Shapland & Co., Ltd. (Toilet Paper)	36	Jackson, J. P., & Co., Ltd. (Rapid Filters, &c.)	40
Burge, Warren & Ridgley, Ltd. (Hot Water Bottles)	30	Fuerst Bros. & Co., Ltd. (Chemicals) ..	iv		
Burkett, Sharp & Co., Ltd. (Chemicals) ..	iv	Fulford, C. E., Ltd. (Zam-Buk)	xxii		
Burroughs, J., Ltd. (Wines) ..	Leader Page				
Burroughs Wellcome & Co. (Quinine Products)	55				

[Continued overleaf]

Big Sales for these

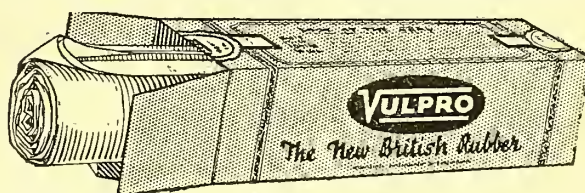
VULPRO

SPONGE BAGS

Chemists who stock Vulpro sponge bags are delighted with the way they are selling.

The attractive orange coloured showcard boxes in which they are packed (2 dozen in three different sizes in each box) show them off to the very best advantage.

The sponge bags themselves are made from the new Vulpro rubber. They are beautifully finished in pretty colours. They are waterproof. They cannot crack or peel. They have no rubber smell. The two dozen sponge bags with their showcard box cost 27/-, leaving an ample margin for profit. Order to-day and watch your sales rise.



VULPRO Waterproof Sheetting

is a tremendous advance on old style waterproof sheetting. Vulpro is made by an entirely new process. It has no smell; it never cracks or peels; it can be sterilised again and again. Vulpro sheetting can even be sewn and machined like cloth. Doctors and nurses recommend it. Hospitals use it. It is sold in sealed orange coloured boxes containing 1-1½ and 2 yards. Retail prices for standard weight sheetting 5/- a yard (40-42" wide), 4/- a yard (36" wide). Trade prices: 3/9 a yard (40-42" wide), 3/- a yard (36" wide), giving 33½% profit.

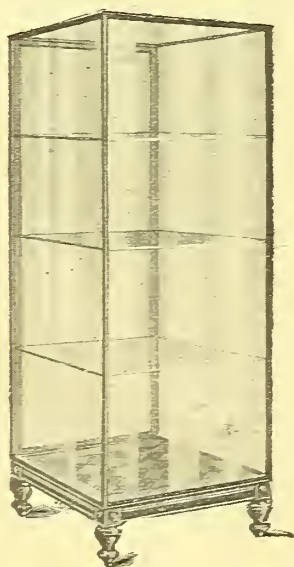
Write for particulars of all Vulpro lines. They sell well and show a good profit. Mention the name of your usual wholesale supplier.

INDEX—cont.

Jeffreys, Miller & Co., Ltd. (Malt Extract, &c.)	14	O'Cedar, Ltd. (Polishes, &c.)	47	Spatula Publishing Co. (Books) ..	52
Johnson & Sons Mfg. Chts., Ltd. (Chemicals)	iii	O-Pine-O Manfg. Co., Ltd. (Toilet Preps.)	54	Spicer, E. H., & Co. (Acidophilus Therapy)	xvi
Josephs, Percy R. E. (Shopfittings) ..	Col. Supp.	Oppenheimer, Son & Co., Ltd. (Robo-leine)	3	Spurway et Cie. Ltd. (Ess. Oils) ..	13
Josephs, Philip, & Sons, Ltd. (Shop-fittings)	53-Col. Supp.	Orridge & Co. (Valuers, &c.) ..Col. Supp.		Squire & Co. (Birmingham), Ltd. (Lobelline)	xviii
Kerfoot, T., & Co., Ltd. (Medicated Lozenges, &c.)	17	Page, Chas., & Co., Ltd. (Chemicals) ..	iii	Stambols, L. J. (Razors and Blades) ..	27
Kirby, Douglas & Co., Ltd. (Monkey Strop)	28	Parke, Davis & Co. (Cod Liver Oil Emulsion)	2	Standard Glass & Hardware Co., Ltd. (Glass Bottles, &c.)	42
Lambert, L., & Co., Ltd. (Caramel) ..	Leader Page	Parkinson's (Sugar-coated Pills) ..	xi	Sterns, Ltd. (Oils, Petroleum, &c.) ..	41
Lawrence, G. H. (Razor Blades)	23	Pastilles, Ltd. (Lakerol)	53	Stevens, H. E., & Co. (Synthetic Ottos)	19
Lax & Shaw, Ltd. (Bottles)	43	Pazo Co. (Pill Boxes)	46	Stubbs, W. B., & Son (Delivery Trucks)	30
Leigh, R. & H., & Sons, Ltd. (Carboy Staud)	46	Perfumers' Supply Co.	54	Sturge, J. & E., Ltd. (Precip. Chalk) ..	viii
LePersonne, L., & Co. (Bottles)	42	Perry & Hope, Ltd.	vi	Tatcho-Tone Co.	54
Lever Bros., Ltd. (Glycerine)	vii	Perry's Powders, Ltd.	xxii	Taylor, Edward, Ltd. (Plasters)	32
Lincoln & Midland Counties Drug Co., Ltd. (Clarke's Blood Mixture) ..	xxii	Pharmaceutical Lanoline Co. (Lano-line)	38	Tilbury, W. R., & Son (Prophylactic Toothbrush)	24
Liverpool School of Pharmacy	xxiv	Photopress (Developing, &c.)	xxv	Timpson, J., & Co., Ltd. (Darwin Blades)	29
Lloyd, Aimée, & Co. (Euxesis)	21	Pierson, Morrell & Co., Ltd. (Aspirin) ..	xi	Tomlinson, T., & Son (Valuer) Col. Supp.	
Lothouse & Saltmer, Ltd. (Losalls Salt)	14	Pillscher, J. (Clinical Thermometers) ..	30	Tyrer, T., & Co., Ltd. (Chemicals) ..	vii
London College of Pharmacy	xxiv	Potter & Clarke, Ltd. (Wholesale Druggists)	45	United Alkali Co., Ltd. (Chemicals) ..	ii
Lorimer-Marshall, Ltd. (Pot Pourri Jars)	23	Prescriber, The	54	Van Der Hoeeks (Bottles)	16
McGlashan, D., Ltd. (Abdine)	xxii	Pulzer, S., & Son, Ltd. (Goggles) ..	33	Vanoré, Ltd.	54
MacLellan, G., & Co., Ltd. (Surgical Rubber Goods)	30	Rayner & Co., Ltd. (Olive Oil)	39	Venusta, Ltd. (Collapsible Tubes) ..	44
Magnus, Mabee & Reynard, Inc. (Ess. Oils)	23	Reddgrave, Butler & Co. (Russian Medicinal Paraffin, &c.)	39	Veno Drug Co. (1925), Ltd. (Dr. Cassell's Tablets)	xxiii
Manchester School of Pharmacy	54	Richter, Gedeon, Ltd. (Chemical) ..	x	Viscose Development Co., Ltd. (Bottle Cappings)	52
Marsden, Chas. C. (Valuer, &c.) Col. Supp.		Rigby Batcock, Ltd. (Hairbrushes) ..	24	Vultex Products, Ltd. ("Vulpro" Goods)	5
Mathews, S., & Co., Ltd. (Curicones) ..	xvi	Roberts' Patent Filling Machine Co. ..	48	Wardle Cotton Co., Ltd. (Surgical Dressings, &c.)	31
Maund, F. (Showcases)	Col. Supp.	Robinson & Sons, Ltd. (Boxes) ..	Leader Page	Warne, W., & Co., Ltd. (Surgical Goods)	54
Maw, S., Son & Sons, Ltd.	11	Rose, J. L., Ltd. (Pyrogallie Acid) ..	vi	Warrington Chem. & Drug Co.	iv
Mawson, John W., & Co., Ltd. (Cap-sules)	vii	Rowland, A., & Sons, Ltd. (Macassar Oil)	21	Watney, J., & Co., Ltd. (Grain Spirit) ..	40
May, Roberts & Co., Ltd. (Service) ..	xxviii	Rudduck & Co. (Shopfittings) Col. Supp.		Watts, J. (Safety Razor Blades) ..	23
Meade-King, Robinson & Co., Ltd. (Petroleum Jelly, &c.)	41	Ruskin, Dawney & Co., Ltd. (Monsley Powder Puffs)	22	Westminster College of Pharmacy ..	xxiv
Methylating Co., Ltd. (Methylated Spirit)	38	Sage, F., & Co., Ltd. (Shopfittings) ..	6	Whitaker & Co. (Hat Dyes, House-hold Dyes)	49
Millar, A., & Co., Ltd. (Orange Wine) ..	16	Saint Raphael Cie (Tonic Wine)	14	White, A., & Sons, Ltd. (Chemicals) ..	vi
Mills, A. J., & Co., Ltd. (Honey)	12	Sandoz Chemical Co., Ltd. (Alka-loids)	ii	Wigglesworth, Ltd. (Coltsfoot Cough Candy)	1
Mitchell, R. S. (Razor Blades)	28	Schering, Ltd. (Pharm. Specialities) ..	Leader Page	Wilkinson, S. W., & Co. (Ointment Mills)	46
Monro, Geo., Ltd. (Cyanogas)	xxvi	Schimmel & Co. (Perfumery Pro-ducts)	18	Wood Bros. Glass Co., Ltd. (Glass-ware)	51
Montgomerie & Co., Ltd. ("Berina" Food)	15	Schutze, F., & Co., Ltd. (Soothers) ..	34	Woolons, C. (Developing, &c.)	54
Morgan-Davis & Sons, Ltd. (Trusses) ..	36	Scruton, Oscar, & Co. (Nurse Har-vey's Mixture)	48	Wright, Layman & Umney, Ltd. (Household Emhrocat)	Cover
Morny Frères, Ltd. (Toilet Preps.) ..	Cover	Scurr, C. A. (Optical Tuition)	xxiv	Yadil Products (1925), Ltd.	xx
National Union of Drug & Chemical Workers	Col. Supp.	Shadeine Co. (Hair Dyes)	54	Youldon, F. (Bottles)	42
		Shawyer, A. J., & Co. (Developing) ..	xxv	Zeal, G. H., Ltd. (Clinical Thermo-meters)	36
		Sherley, A. F., & Co., Ltd. (Dog and Cat Medicines)	48		
		Showcard Specialists, The	xxiv		
		Slack, A. Bernard	Col. Supp.		
		Smith, Martin H., Co. (Ergoapiol) ..	xii		
		Smith, T. & H., Ltd. (Chemicals) ..	v		

DISTINCTIVE SHOWCASES

FOR THE MODERN CHEMIST.



TYPE
U. 917.

We illustrate here an elegant sales promoting show-case for the modern Chemist. This case is constructed in either Oak or Mahogany, glazed all round and on top with clear plate glass, back fitted with one opening sash. The interior is fitted with three rows of plate-glass shelves on adjustable steel bronzed brackets, and the bottom is of Oak parquetry.

Size 2-ft. long by 2-ft. deep by 6-ft. high.

WRITE FOR OUR COMPLETE CATALOGUE
ILLUSTRATING SHOWCASES AND DISPLAY
FITTINGS OF EVERY DESCRIPTION FOR
THE RETAIL CHEMIST.

FREDK. **SAGE** & CO., LTD.
58-62 GRAY'S INN ROAD, LONDON, W.C.1,
AND AT
MANCHESTER, PETERBOROUGH, CARDIFF, LEEDS.

SAFETY

first

"SPECIALTY"

LIQUID PARAFFIN .890

Remains Brilliant at 0 deg. Cent.

Cold weather is the crucial test of Liquid Paraffin. Inferior oils cloud quickly at low temperatures, and no pharmacist who values the medical goodwill of his business can afford to display a cloudy Liquid Paraffin, or one that will cloud when in the hands of the purchaser.

No excuse now exists for stocking inferior Liquid Paraffin. There is no Liquid Paraffin approaching the quality of Specialty .890 which can be obtained at a lower price. And there is no other Liquid Paraffin—at any price—which is so thoroughly standardised and controlled in every detail.

A new filler, fitting both the 5-gallon and 2-gallon containers, is supplied free. Send your enquiries, and you will note how advantageously you can buy.

Any quantity supplied from $\frac{1}{2}$ gallon to tons, as required.

'Specialty'

.890

LIQUID PARAFFIN

Adds to the Profit and Prestige of your Pharmacy.

ANGLO-AMERICAN OIL CO., LTD.

"SPECIALTY" Department

"SEMPROLIA" WORKS,

Albert St., CAMDEN TOWN, LONDON, N.W.1

'Phone: Hampstead 4046-47. Tel.: "Nufinjol, Norwest, London."



2 REASONS

for the superiority of

"SPECIALTY" LIQUID PARAFFIN.

1. Every gallon of "Specialty" Liquid Paraffin .890 is definitely guaranteed to be of standard uniformity, viscosity, purity, therapeutic value, and pharmaceutical excellence.
2. It never varies, is brilliant at 0 deg. Centigrade, and conforms to tests far more rigid than those of the British Pharmacopæia.

For these reasons alone it is the most satisfactory Liquid Paraffin obtainable.



The
Famous Natural Aperient Water.

Hunyadi János

An extensive propaganda is being carried out among the Medical Profession and the general public which is resulting in a largely increased demand for this world-renowned **NATURAL** Aperient Water.

Prices to the Trade :

24/- per doz. large bottles - or 48/- per case of 25
18/- „ „ small „ - or 72/- „ „ 50

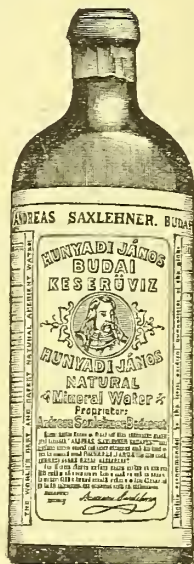
Net, Carriage Paid.

Minimum Retail Prices :

2/6 per large bottle.

2/- per small bottle.

Hunyadi János has for more than fifty years been recognised as the best of the **NATURAL** mineral waters containing sulphate of soda and sulphate of magnesia. Its laxative action is sure but gentle; it stimulates the liver and cleanses the blood.



Many of your customers who already know its value will be glad to get it again. Others will want to buy it on the recommendation of their doctors, who constantly prescribe HUNYADI in preference to ordinary aperients; therefore it pays Traders to keep a stock of this famous **NATURAL** Aperient Water.

Sole Wholesale Agents :

INGRAM & ROYLE, LTD.

BANGOR WHARF

45 BELVEDERE ROAD

LONDON, S.E.1

19 South John Street, Liverpool

Bath Bridge, Bristol

Genoxide

REGD

THE NEW (12 VOLS) PEROXIDE

"B.P. for purity
—stable to the last drop"

Three Sizes
Popular Prices

PUBLIC PRICE COST PRICE

4 oz.	-	1/-	at	8/-	per doz.
8 oz.	-	1/6	at	12/-	„
16 oz.	-	2/6	at	20/-	„

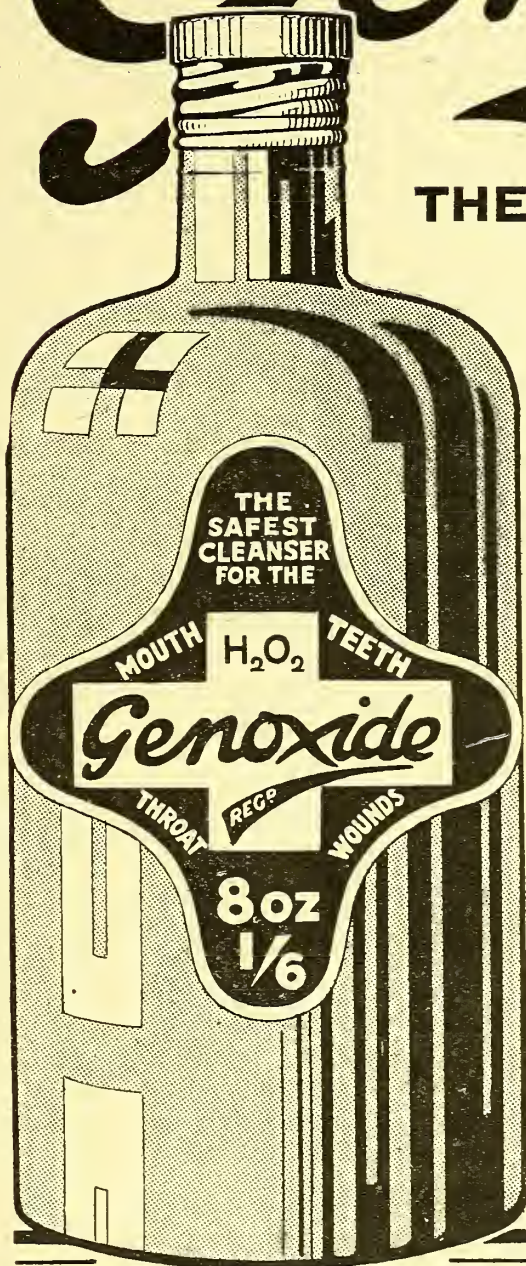
Orders equivalent to
3 dozen 4 oz. less - - 2½%

Orders equivalent to
1 gross 4 oz. less - - - 5%

Terms Cash in 30 days net.

Minimum One Dozen Lots.

Special Terms
for Window Display



GENOXIDE LTD - LUTON

The **DARWIN** **SAFETY RAZOR BLADE** **BOOM IS STARTING**

Watch your post! Full details are coming to you. How we are going to sweep foreign blades from the market. How we are going to make it worth your while helping us to do it.

Even now you are selling Darwin Blades. On the day you receive our full announcement your sales will be multiplied heavily. Wisdom suggests laying in larger stocks in advance.

Retail price 2/3 for 5. 4/6 for 10.
Cost to you 1/6 for 5. 3/- for 10.
— Your wholesaler will supply. —

Darwin

PATENT COBALT HIGH SPEED STEEL

Safety Razor Blades

Darwin blades, with their rustless wonder edges, are available for all Gillette, Auto-Strop, Ever-Ready and Clemak type holders. Of all the usual dealers, 10 for 4/6, 5 for 2/3.

DARWINS LIMITED, FITZWILLIAM WORKS, SHEFFIELD, ENGLAND.

Maw's Page



NOW is the time to lay in your stocks of Maw's Drip-Feed Lamps and Aero-Cotarol and so to prepare the way for substantial profits, satisfied customers and a steady flow of repeat orders.

Maw's Drip-Feed Lamp is a scientifically designed vaporizer which burns continuously for many hours without attention and distills into the air the soothing, healing and antiseptic vapour of Aero-Cotarol, a preparation scientifically compounded of cresols and aromatic essential oils.



There is not the slightest danger of fire, and the speed of vaporization can be regulated.

Both lamp and vaporant have received the approval of the medical profession. Hundreds of doctors are recommending them to their patients for the treatment of influenza, bronchitis, asthma, whooping cough, common colds, etc.

Each Winter the sales of Drip-Feed Lamps and Aero-Cotarol increase. Every pharmacist should be getting a share of the business. Send us your order now.

We have a scheme which will introduce the Drip-Feed Lamp to the doctors in your district. Write for particulars.

PRICES.

	Wholesale.	Retail.
Drip-Feed Lamp	20/- doz.	2 6 each.
In 3 doz. lots	19/-	„ „ „
Aero-Cotarol		
Large size	18/-	2 3 per bottle.
Small size	10/-	1 3 „

Night Lights specially suitable for the Drip-Feed Lamp. In boxes of six. Per dozen boxes, 6/-. Maw's Drip-Feed Lamp is protected by Patents No. 170463 and 12433-24.

S. Maw, Son & Sons, Ltd.,
Aldersgate St., London,
and Barnet.



PURE MALT EXTRACT

with *FINEST*

NORWEGIAN COD LIVER OIL

The Brand that does not separate nor crystallize.

Your own name and address on labels. In English jars, etc. Direct from the actual manufacturers.

THE BRITISH DIAMALT COMPANY
SAWBRIDGEWORTH - - HERTS.



Build up a Profitable HONEY TRADE

The delicious flavour of this thick, "set" creamy

NEW ZEALAND
Imperial Bee **Honey**

is irresistible. Sell it and reap a crop of repeat orders. It is a BRITISH EMPIRE PRODUCT THROUGHOUT, and is GUARANTEED PURE and WITHOUT PRESERVATIVES.

CASES per dozen, carriage paid.

48/1's Glass Screw-top Jars	..	..	..	at 14/-
48/1's Glass Screw-top Jars	..	..	..	at 8/6
48/1's Monopots	..	..	..	at 12/6
48/1's Monopots	..	..	..	at 7/3

If you cannot obtain supplies through your wholesaler, write to
A. J. MILLS & CO., Ltd. (Produce & Canned Goods Dept.), 14 Tooley St., London, S.E.1



BRAND'S ESSENCE

of Beef, Mutton or Chicken consists solely of the juice of the finest meats, prepared with the greatest care under the most hygienic conditions.

Essential in the Sick Room.

Sold by all Chemists and Stores.

BRAND & CO., LTD.

Mayfair Works, Vauxhall. LONDON, S.W.8.

WINCARNIS

1926 AUTUMN BONUS

of 2/- per case

Sept. 1st—Oct. 30th



FROM 1st September to 30th October only we give you a Bonus of 2/- per dozen large size and 1/- per dozen medium size, on all retail orders received and invoiced. This Bonus is allowed by Wholesalers on goods invoiced during this period, provided a form is filled up and handed to them, so that they may claim the rebate from us.

WINCARNIS PRICE LIST

(In Great Britain and Northern Ireland only.)

	Per. doz.		Retail Selling Price.	Discounts for Quantities.	
				Trade	Cash 30 days
LARGE	48/-	..	5/-	Less than 6 doz.	1 1/4% and 1 1/4%
MEDIUM	28/-	..	3/-	6 doz. & under 12	2 1/2% .. 1 1/4%
LARGE	48/-	..	5/-	12 doz. & under 25	3 1/4% .. 1 1/4%
(With quinine)				25 doz. & upwards	5% .. 1 1/4%
MEDIUM	28/-	..	3/-		
(With quinine)					

NOTE—Two dozen Medium are equivalent to One dozen Large.

Bonus allowance: 1/- per dozen Medium, 2/- per dozen Large on all retail orders received and invoiced during the period, Sept. 1st—Oct. 30th.

Wincarnis Autumn Advertising Bigger than ever before—Now in full swing

September 1st saw launched the greatest volume of Wincarnis publicity ever issued. The opportunity is yours to handle a greater volume of Wincarnis trade than ever before. A magnificent harvest awaits you—yours for the reaping.

To link your window display unmistakably with Wincarnis advertising is all we ask in return. Make your window pay with a quick selling article—WINCARNIS.

Send in your order NOW!

COLEMAN & CO., LTD., WINCARNIS WORKS, NORWICH.

MALT EXTRACT

MALT & OIL

The No Trouble Malt Extract

The Malt that cannot crystallise.

We are constantly receiving unsolicited testimonials regarding the quality of our Products. All our Customers are satisfied.

Are you as well satisfied with your present supply?

Write us for samples and prices.

JEFFREYS MILLER & Co., Ltd.
LEYLAND MILLS, WIGAN.

Phone :
WIGAN 327.

Telegrams :
"MALTUM," WIGAN.



Saint-Raphael

**Tonic, Restorative,
Digestive Wine.**

**Known throughout the World,
and prescribed in all cases of
ANÆMIA, DEBILITY, and CON-
VALESCENCE, to Young Women,
Children and the Aged.**

DOSE : One wine-glass after the
two principal meals.

Recommended by—
PROF. BOUCHARDAT, Professor of
Hygiene, Paris Faculty of Medicine.
DR. MACNAUGHTON JONES, London,
England.

"For more than thirty years St. Raphaël Wine has been exclusively prescribed, with success, in the Paris hospitals as a pure tonic, by eminent physicians, such as Magendie, Ros on Chomel, Velpeau, Requin, Monneret, Trousseau, Grisolle, Laënnec, &c."—*Union Médicale*, May 8 and June 12, 1873.

"The 'Vin de St. Raphaël' is often used for ladies nursing their own children; it is preferable to stout, which creates an unhealthy fat."—*The Lancet*, London, England.

"St. Raphaël Wine is most precious in all cases where it is necessary to give tone to the system, without effort or shock."—Dr. C. DES BARRES.

Cie du VIN SAINT RAPHAEL, Valence, Drome, FRANCE

**To be obtained from all
Wholesale Druggists.**

LOSALL'S SALT

SELLS FREELY AND READILY.

PAYS 50% ON OUTLAY.

An infallible remedy for

**Gout
Rheumatism
Eczema & Skin
Affections**

P.A.T.A. doz.
net

4 oz. tins 1/-, 8/-

8 oz. „ 1/9, 14/-

Bottles 2/6, 20/-

Attractive advertising
matter supplied on
application.



SOLD EVERYWHERE.

Manufactured by
LOFTHOUSE & SALTMER, Ltd.
HULL.

"Berina"—the most profitable line

THE NEAREST FOOD TO HUMAN MILK

"Berina" is an absolutely new Baby Food, the latest outcome of research. The Proprietors make this statement with a full sense of responsibility. They are satisfied that they have succeeded in perfecting a food that is, without qualification, the nearest to human milk. It is in no extravagant spirit that they claim "Berina" to be the best paying line which enterprising chemists can handle.

The results obtained with "Berina" are incomparably good, this fact being testified to by eminent medical men and discerning mothers. It comprises all the natural essentials requisite and necessary to scientifically

proportioned and accurately balanced baby food in the parts of Full Cream Milk, Cream of Wheat, and Sugar of Milk. These are so arranged as to give the maximum nourishment to the robust, healthy child as well as to the weak and ailing.

Infants can be fed with "Berina" from birth, and this food does not cause or bring about any stomach or digestive troubles. As a matter of fact, children fed on it are quite free from digestive troubles.

It will be readily appreciated, therefore, that "Berina," possessing such outstanding advantages, commands a ready and persistent sale.



The Proprietors wish these Foods to be established on their merits and not through extravagant claims and press advertising.

The Proprietors will be glad to send free sample of the "Berina" Food to Chemists on receipt of postcard.

"BERINA"

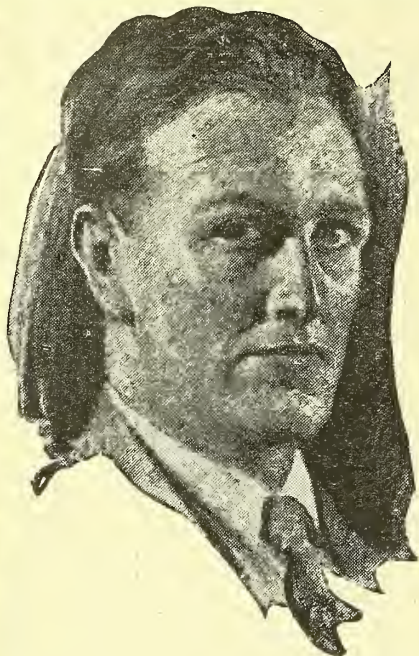
BERINA FOOD-BERINA MALTED MILK

Prepared only by

MONTGOMÉRIE & CO., LTD.

IBROX, GLASGOW.

(Proprietors of "Bermaline" Bread.)



"Your Customers for Horlick's"

The Business Man.

Keen on making a name for himself, both in business and sport, but in doing it he expends a vast amount of energy. Suggest that he keeps a bottle of Horlick's by him ready to convert its ample, easily-digested nourishment into new energy as he needs it.

Price-protected,
and sales directed through Chemists.



Horlick's Malted Milk Co., Ltd., Slough, Bucks.

6

PURE ORANGE WINE

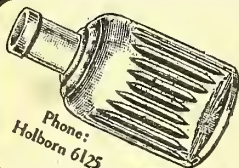
A. MILLAR & CO., LTD., DUBLIN

VINUM AURANTII B.P.)

Prepared in strict accordance with the Formula of the British Pharmacopoeia.

(Wholesale only.

Samples from Head Office, Thomas Street, DUBLIN, or London Office, 74 Great Tower Street, LONDON, E.C.3.



Phone:
Holborn 6125

GLASS BOTTLES

of every description for
all purposes.

ENQUIRIES SOLICITED.

VAN DER HOEKS

321/25 Bank Chambers
329 High Holborn
LONDON, W.C.1.



Telegrams
Glashook.

1926

MARTEN'S

1927

COD LIVER OIL

FINEST NORWEGIAN MEDICINAL QUALITY, B.P.

STEAM-REFINED. NON-CONGEALING. BRILLIANT. GOOD TASTE. EXCELLENT
APPEARANCE. Also VETERINARY QUALITY.

Sole Consignees in the
United Kingdom:

FRED^K BOEHM, LIMITED

17 JEWRY STREET, LONDON, E.C.3.

140 WEST GEORGE STREET, GLASGOW

Stocks kept in London, Hull, Liverpool, Glasgow

Royal 3445.

An Efficient Salesman

THIS striking counter display stand was so much appreciated by Chemists last year that we have decided to offer it again this season. Its ability to "sell the goods" is not a matter for conjecture, but has been tested in hundreds of pharmacies all over the country. By taking advantage of our free offer now you obtain a silent salesman of proved efficiency.

Free of Charge

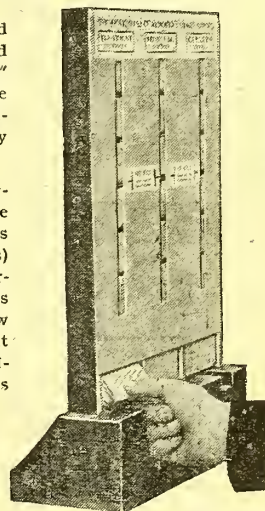
The stand is supplied free on request with orders for 6 dozen "Ivory" Lozenge tins. This series is well worth displaying and recommending because of the pharmaceutical quality of the lozenges themselves, the attractive "pack" and the substantial profit margin. In addition to the popular varieties, Catarrh, Bronchial and Peppermint, Iodised Throat is available and may be substituted as desired.

gd. tins (P.A.T.A.) 5/6 doz. 6 doz. 5/3



Strongly made of wood and leather-board and taking up only 14" x 6" counter space, the display is a great convenience to the busy Chemist.

As the tins are removable only from the back (which carries duplicate title slips) the display is pillar-proof. Narrow slits show the Chemist how many tins are present and a safety line indicates when it is necessary to re-fill.



THOMAS KERFOOT & CO LTD
BARDSLEY VALE, LANCASHIRE,
& Bardsley House, London, N.1
ESTABLISHED 1797.

B/521

COPYRIGHT

FACTORIES & DISTILLERIES—CANNES-GRASSE, FRANCE.

ESSENTIAL OILS

ANISEED.
CLOVES (ANG.).
CINNAMON BARK.
CITRONELLA.
EUCALYPTUS.

JUNIPER.
LEMON.
PEPPERMINT.
ROSEMARY.
THYME.

BERGAMOT.
GERANIUM.
LAVENDER.

NEROLI.
ROSE.
YLANG YLANG, Etc.

WE CAN OFFER A B.P. PEPPERMINT OIL OF FULL MENTHOL CONTENT AND EXCEPTIONALLY FINE AROMA AT A VERY LOW PRICE.—WRITE FOR SAMPLE AND PRICE.

CANNES.
PARIS.
LEIPZIG.
NEW YORK.

SPURWAY

ET CIE, LTD.

TELEGRAMS:
"NEROLI, LONDON."
TELEPHONE:
BISHOPSGATE 1372.

89, GREAT EASTERN STREET, LONDON, E.C.2.

Schimmel & Co.

MILTITZ, near LEIPZIG.

Manufacturers of

ESSENTIAL OILS, ESSENCES & AROMATIC CHEMICALS

Speciality :
FIXORESIN

*A fixing Agent for
Soap Perfumes and Extractions.*

In Various Aromas.

SAMPLES ON APPLICATION.

PEPPERMINT OIL, B.P.
SAVIN OIL
PINE OIL
SAFROL
BENZALDEHYDE, F.F.C.
FLORAL OILS
ESSENCES FOR LIQUEURS
FRUIT ESSENCES, etc.

SOLE AGENTS FOR THE U.K.

FREDK. BOEHM LTD., 17 Jewry St., LONDON, E.C.3

SYNTHETIC OTTOS

("Zinyl" Brand Regd.)

*Most economical, in the manufacture of all
Perfumes, Toilet Preparations, Bath Salts, etc.*

IMPORTANT ALTERATIONS

	PER OZ.		PER OZ.
*CARNATION - -	7/6	OPOPONAX - -	7/6
CHYPRE - - -	8/6	*ORANGE BLOSSOM	8/6
ESS BOUQUET - -	7/6	*ORIENTAL OTTO	12/6
GERANIUM - - -	5/-	A heavy Eastern type, and reminiscent of the Far East.	
HELIOTROPE - -	7/6	*PINK - - - - -	7/6
HONEYSUCKLE - -	7/6	ROSE ("Zinyl" Brand)	13/6
HYACINTH - - -	7/6	Almost indistinguishable from genuine Otto.	
JASMIN - - - -	8/6	ROSE RED - - -	12/-
JOCKEY CLUB - -	7/6	Red Rose of Provence.	
LAVENDER - - -	5/-	ROSE WHITE - -	13/6
LILAC - - - - -	7/6	SWEET PEA - - -	7/6
LILY of the VALLEY	8/6	SYRINGA - - - -	7/6
MILLEFLEUR - -	7/6	VIOLET - - - - -	10/-
NARCISSUS - - -	8/6	VIOLET de PARME	12/6
*NEROLI - - - -	8/6	WALLFLOWER - -	7/6
NEW MOWN HAY	7/6	YLANG YLANG - -	7/6

* These Ottos are extra strong.

Concentrated Essence

EAU DE COLOGNE

2 to 4 ounces to 1 gallon of Spirit 30 o/p. makes a de-
lightful perfume for which a prize medal was awarded **3/6 oz.**

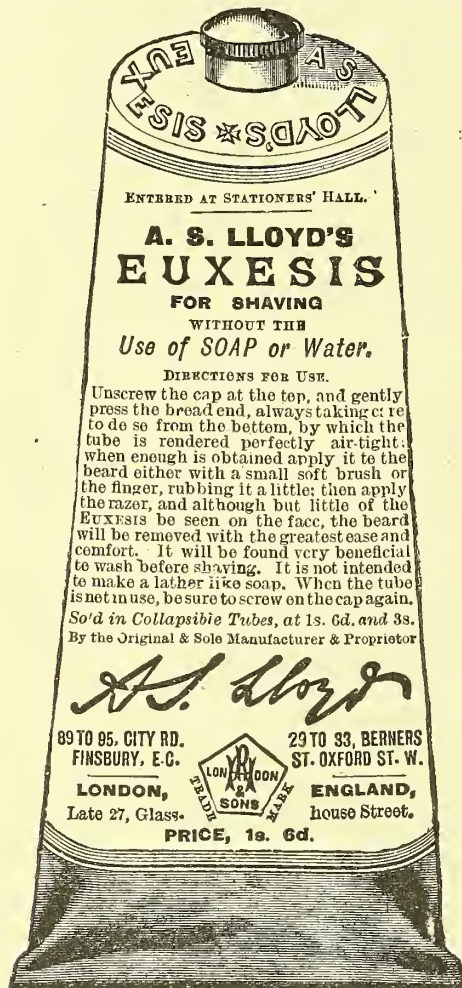
H. E. STEVENSON & CO.

122 Great Suffolk Street, LONDON, S.E.

A. S. LLOYD'S EUXESIS

(THE GENUINE).

For Shaving without Soap, Water, or Brush.



Sold by all Perfumers and Chemists throughout the World.

R. HOVENDEN & SONS having purchased, under an administration suit, the Business of the late A. S. LLOYD, with the Receipt, Trade-Mark, and Goodwill of the celebrated Euxesis, the Trade are cautioned that the original and genuine Euxesis is now manufactured at our Factory ONLY and may be obtained at either of our Warehouses.

PRICES ON APPLICATION.

NOTICE.—THE GENUINE A. S. LLOYD'S EUXESIS bears a label printed in BLACK only on a Yellow ground, with our Trade Mark at the bottom, as Illustration.

Proprietors: **R. HOVENDEN & SONS, LTD.**
LONDON: 29-33 Berners Street, W.1; and 89-95 City Road, E.C.1



CARNATION PERFUME

Pot Pourri
Compressed Blooms
Silk Sachets
Toilet Soap
Bath Crystals

DO YOU STOCK THEM?

If not, read the offer given below.

We grow the Carnations, endless thousands of them, from which the perfume is distilled.



SPECIAL OFFER

To a limited number of Chemists (one only in each Town) we are supplying our delightful Perfume on FULL SALE OR RETURN, with three months' credit. Write for particulars now.

SYNTHETIC OTTOS

VERY ECONOMICAL ON ACCOUNT
OF THEIR STRENGTH

Suitable for all Toilet Preparations

	Per oz.		Per oz.
CARNATION	7/6	MELOTA	10/6
HYACINTH	7/6	ORANGE BLOSSOM	7/6
JASMIN	9/-	ROSE	12/6
LILY OF THE VALLEY	7/6	SWEET PEA	12/-
		PARMA VIOLET	10/6

E. H. BUTLER & SON MANUFACTURING
CHEMISTS
Humberstone Gate - - LEICESTER

GALJADO HAIR COLOUR RESTORER

For Grey or Faded Hair.

A preparation which sells on its merits. Non-injurious.

In two sizes:
Retail: 2/- and 3/6 per bottle.
Trade: 12/- and 22/- per dozen.
TRIAL DOZEN SENT POST FREE.

Cash with order.

Note the Profit.

Of all Wholesalers or direct.

THE GALJADO PERFUMERY CO. Ltd.
93 Worship Street, London, E.C.2.



A. S. LLOYD'S EUXESIS.

For Shaving without Soap, Water, or Brush.

CAUTION.

The Labels on GENUINE EUXESIS bear two signatures—
A. S. Lloyd in Black Ink, and that of his Widow,
Aimée Lloyd, in RED. Refuse any other.

**Sole Manufacturers and
Proprietors:**

AIMÉE LLOYD & CO.

**23 PANTON STREET (formerly named Spur Street),
HAYMARKET, LONDON, S.W.**

N.B.—When ordering from Wholesale Houses write LLOYD'S EUXESIS (WIDOW'S).

Niroda Liquid
(Eau de Niroda)

Prevents Excessive perspiration. Perfectly harmless and in great demand. Retail at 1/9. Extensively advertised.

Dorin of PARIS
Aids to Beauty



Makers of the famous
ROUGE BRUNETTE AND DORINA POWDER
DORIN LTD., 41 Charterhouse Square, LONDON, E.C.1.

ORDER YOUR STOCK
NOW FROM

**ROWLAND'S
MACASSAR OIL**

A line it pays to stock.
P.A.T.A. 3/6, 7/-, 10/6.

THROUGH ALL WHOLESALERS.

A. Rowland & Sons, Ltd.
112 GUILFORD STREET, LONDON, W.C.1.

Telegrams: Raab, Roermond.

Aromatic Chemicals Flower Oils

Synthetic Perfumes Essential Oils

CHEMICAL WORKS, ROERMOND

H. RAAB & CO., ROERMOND, HOLLAND.

Agent for the U.K.:
MR. ALFRED PAUL WHITE, 5 Water Lane, Gt. Tower St., London, E.C.3

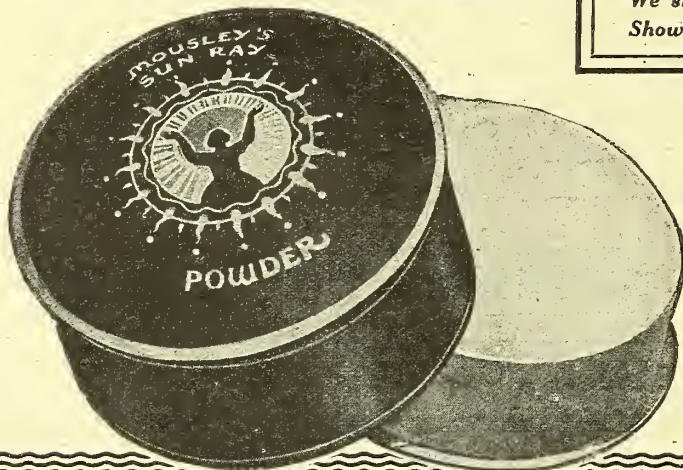
Telegrams: Whatep, Bilgate, London.



This Seal appears on all brands of Mousley products comprising the

"SUN RAY" SERIES.

Catalogue and trade terms of all Mousley lines sent on application



"SUN RAY" Powder

as illustrated, is treated by the special "Sun Ray" process—which ensures complete hygiene—and is as delicate and subtle in aroma as in texture. "SUN RAY" powder is sealed in Celophane box immediately after receiving the Ultra Violet Ray treatment.

We shall be pleased to welcome you in our Showrooms at 38 Old Bond Street, W.1

The "SUN RAY" SERIES is manufactured by

FRANK MOUSLEY

of 38 Old Bond Street, W.1

Laboratory and Factory:

Wilderness Works, East Sheen

Sole Distributors:

Ruskin Dawney & Co., Ltd.

of 38 Old Bond Street - LONDON, W.1

MERCOLIZED WAX

— : for the Complexion : —

and

STALLAX

— : a Shampoo : —

TWO substantial and well-advertised lines which show a handsome profit to the Retailer, and, moreover, may be stocked fearlessly owing to the Manufacturers' most liberal Sale or Return Guarantee.

Both are obtainable in two sizes, and their reputation and sterling value assure a steady turnover.

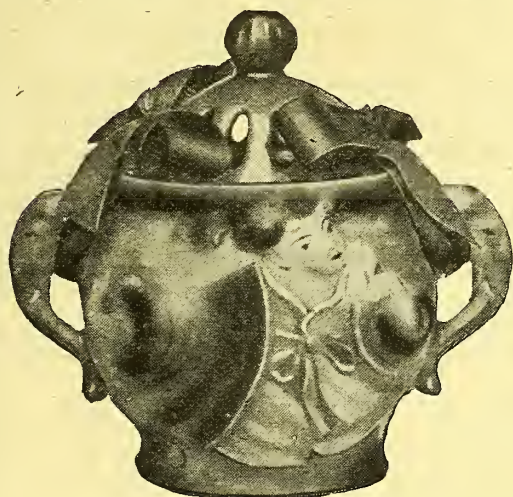
Advertising Matter, advice, and sales help are always available from

DEARBORN (1923) LIMITED

37, GRAY'S INN ROAD

LONDON, W.C.1.

POT POURRI JARS



Filled with delicious
POT POURRI
blended to last for years.

Supplies of new patterns and
colourings will be available in
a few days.

IDEAL FOR YOUR CHRISTMAS TRADE.

LORIMER-MARSHALL, Ltd., 12 Tower Hill, London, E.C.3

Assist British industry by recommending the
'WATTS' Sheffield-made Safety Razor Blade,
the blade of *super-keenness.*



3/6

per doz.
allowing
50% PROFIT
on cost for
the dealer.

Sole Manufacturers: **JOHN WATTS,**
Dept. 3, LAMBERT WORKS, SHEFFIELD.
London: 24, REDCROSS ST., E.C.1.

Established over 150 years.

A counter display will help.

A user writes: "Can't understand
people buying foreign blades when
such as yours are obtainable."

12 Perfect Blades
in Every Dozen

For Gillette-type and
Autostrop-type holders

"LAUREL" SAFETY RAZOR BLADES.

ALSO
AUTO-
STROP
TYPE



TRADE
WITHIN
THE
EMPIRE

Retails at a less price than any on the Market.
Satisfaction Guaranteed. Send for free samples.

Manufactured by
GEO. H. LAWRENCE, 32 EYRE STREET,
SHEFFIELD.
Phone: 1071 Cent. Telegrams: "Laurel Sheffield."

MAGNUS, MABEE & REYNARD INC.

AMERICAN ESSENTIAL OILS

BAY
CEDARLEAF
CEDARWOOD
PEPPERMINT
PETITGRAIN
SPRUCE
TANSY
ERIGERON
SPEARMINT
WORMSEED

BALSAMS

ADDRESS:

MAIN SALES OFFICES
32 CLIFF STREET, NEW YORK, U.S.A.

The World's Best Hairbrush

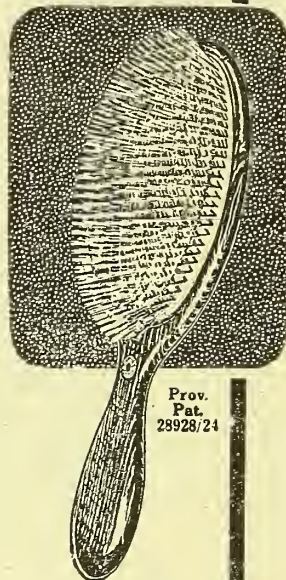
means quicker sales and bigger profits for you

Why? Because it has more selling points than any other brush in the world. Because it meets to a greater degree than all others the modern woman's need for deep, penetrating hairbrushing plus **absolute cleanliness**.

Consider for a moment the strength and toughness of the bristles and the resiliency of the rubber pad in which they are set. Is there any other brush more capable of getting right down to the roots of the hair than the "Klenly" Brush? Consider also the tempting beauty of the various colours and designs.

And this is not all. Both the bristles and the pneumatic pad are **white**. Because of this the brush is always kept clean; its whiteness instantly betrays any dirt or dust that may come from the hair. The air vent, too, is placed in such a position that it's the easiest thing in the world to clean the brush.

These then are the reasons why you should stock the "Klenly" Hairbrush—why you should take **your** share of the extra-generous margin of profit that we as the **actual manufacturers** can afford to allow you.



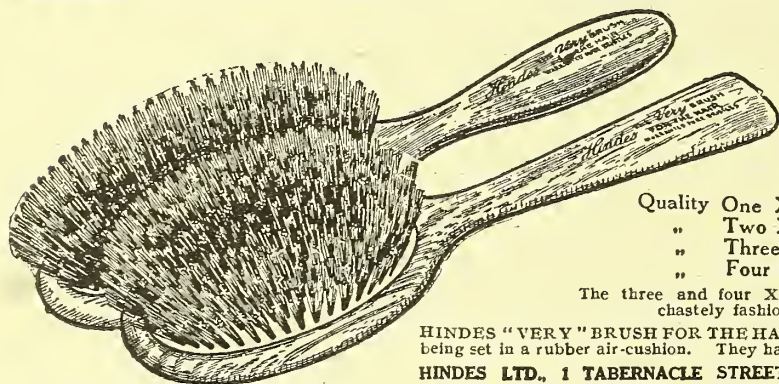
Prov.
Pat.
28928/24

RIGBY'S Klenly HAIR BRUSH

RIGBY, BATTCOCK, LTD., 28 MUSEUM STREET, LONDON, W.C.2.

Protected in U.S.A., CANADA and FRANCE.

Write at once for special folder giving full details and prices of the various designs and see for yourself what attractive opportunities the "Klenly" Brush affords for profitable business.



HINDES "VERY" HAIR BRUSH

Quality	One X	Sold at 7/6d. each.	TRADE
"	Two XX	" 10/6d. "	PRICE
"	Three XXX	" 15/- "	33 1/2%
"	Four XXXX	" 18/6d. "	

The three and four XXXX grade is made in Ebony or Rosewood chastely fashioned in both oval and circular bodies.

HINDES "VERY" BRUSH FOR THE HAIR is guaranteed pure bristles, the multiple tufts being set in a rubber air-cushion. They have been known to the trade for nearly 40 years.

HINDES LTD., 1 TABERNACLE STREET, LONDON, E.C. :: Works: BIRMINGHAM

TILBURY'S "FORT" Prophylactic TOOTH BRUSH

In the "ORANGE BOX."

"IDEAL"

DENTAL PLATE BRUSH

in Carton.

Very
stiff
Bristle.



On orders of 1 gross customer's Name and Address printed free of charge on Carton.

Established
1880.

W. R. TILBURY & SON, Hackney, London, E.9

Clissold
1794.



STILL BROADCASTING SAMPLES!

To Increase YOUR Trade

THE extensive and intensive advertising campaign constantly running in connection with "Harlene" continues and will continue to draw immense response from all over the country. Thousands of Free Trial Gift Parcels are dispatched to new applicants every day, thus increasing the already colossal retail business.

Do you stock the following "Quick Sellers"?

'Harlene' for the Hair 'Astine' Vanishing Cream
'Uzon' Brilliantine 'Astine' Tooth Cream
'Cremex' Shampoo Powders 'Astine' Shaving Stick
'Astol' for Grey Hair 'Astine' Nail Cream

Every day "Harlene-Hair-Drill" becomes more popular and every day the demand for "Harlene" preparations becomes greater. Don't be behind the times and turn away good business because you have not got sufficient stocks.

PLACE YOUR ORDER TO-DAY,

"HARLENE-HAIR-DRILL" is EVERYONE'S Toilet Exercise because it requires so little time to produce beneficial results.

"HARLENE-HAIR-DRILL" preparations should be stocked by every Chemist and Drug Store because it is EVERYONE'S Toilet Exercise.



2 NEW LINES.
"JUNOFLORIS"
SPRING BREATH
TABLETS.

A Breath Purifier & Antiseptic Mouth Deodorant—NOT a Cachou.

"JUNOFLORIS" DENTIFRICE.

A splendid Teeth Whitener & Cleanser & Breath Purifier.

Prices of both (min. retail)

7½d. and 1½d.

Makers' Prices:

6s 8 and 12/- per doz.

Less 20% discount.

EDWARDS' HARLENE, Limited

20, 22, 24 & 26 LAMB'S CONDUIT STREET, LONDON, W.C.1

Telegraphic Address: " CRESSWELL, HOLB., LONDON."

Telephone: No. 1432 Holborn.

THE SPONGE HOUSE

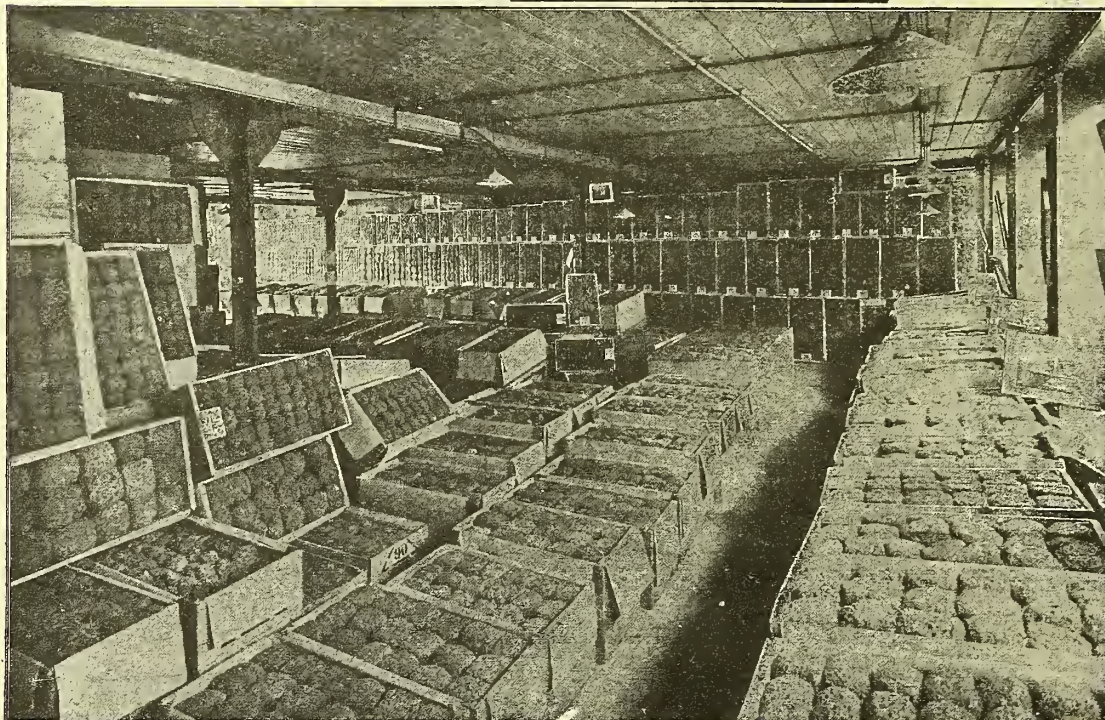
INTERNATIONAL SPONGE IMPORTERS, LIMITED,

CRESSWELL BROTHERS BRANCH

Sponge Importers, Exporters and Merchants, and Chamois Leather Dressers,

18 and 19 RED LION SQUARE (New Warehouses and Steam Bleacheries, 45, EAGLE STREET) LONDON, W.C.

WITH THE LARGEST STOCKS OF ALL SPONGES IMPORTED DIRECT FROM THE FISHERIES AT LOWEST PRICES.



BUYERS ARE INVITED TO CALL AND INSPECT OUR LARGE AND VARIED STOCKS, AND THEY WILL CONVINCE THEMSELVES THAT THEY ARE DEALING IN THE "CHEAPEST MARKET"

UNBLEACHED MEDITERRANEAN SPONGES in Original Cases



HONEYCOMB.

Extra Choice. Finest Texture and Shape. The Pick of all the Fisheries.

Pieces in Case.	Average Price per Piece.
300 Toilet at	9d.
250 " "	1/-
200 " "	1/6
160 " "	2/-
140 " "	2/6
120 " "	3/-
100 " "	3/6
90 Medium Bath	4/6
80 " "	5/6
72 " "	6/6
60 " "	7/6
45 Large	8/6
30 " "	10/6

HONEYCOMB.

Toilet & Bath.

Good 2nd Quality.

Pieces in Case.	Average Price per Piece.
270 at	6d.
180 " "	9d.
170 " "	1/-
160 " "	1/6
140 " "	2/-
120 " "	2/6
110 " "	3/-
90 " "	3/6
80 " "	4/-
75 " "	4/6
70 " "	5/-
65 " "	5/6
60 " "	6/6

FINE TURKEY

SOLIDS.

SELECTED SHAPES.

1st Quality.

	Average Price per Case.
Nursery 200 at	1/-
Toilet 150 " "	1/6
" 100 " "	1/9
" 100 " "	2/-
" 80 " "	2/6
Bath 50 " "	3/-
" 36 " "	4/-
" 24 " "	5/-



LOOSE GOODS DEPARTMENT.

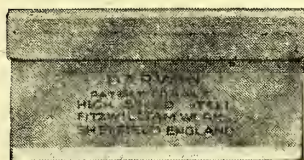
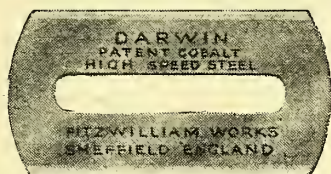
SPONGES IN SMALL PACKAGES. Fine Turkey. Fine Egyptian and Honeycomb. In 1st, 2nd and 3rd Qualities, Bleached or unbleached (state which in ordering). On strings of 1 dozen pieces, or loose in bags. At per doz.: 2s., 3s., 4s., 6s., 9s., 12s., 15s., 18s., 24s., 30s., 36s., 42s., 48s., 54s., 60s., 66s., 72s. Bleached Cuban. At per String or Dozen. Wool, Grass, Yellow and Fine. 1s., 2s., 3s., 4s., 6s., 9s., 12s., 15s., 18s., 24s.

NEW VELVET HONEYCOMB. Soft, Durable and large for money. Suitable for Toilet and Bath purposes. PRICES—Cut Shapes 3s., 4s., 6s., 9s., 12s., 15s., 18s., 21s., 24s. per dozen. Natural Shapes 4s., 6s., 9s., 12s., 15s., 18s., 21s., 24s., 30s., 33s., 36s. " Strongly recommended where an inexpensive Toilet and Bath Sponge is required. "

DARWIN—SPECIAL BLADE BONUSES

THE BLADE WITH THE RUSTLESS EDGES.

FOR A FEW WEEKS ONLY, PARCELS AS FOLLOWS:—



Made from Sheffield
Patent Cobalt High-Speed Steel.

Wholesalers and Retailers can obtain supplies of these Blade Bonus Parcels as well as Regular Blade supplies from—

No.	Blades	Costs	Sells for	%Profit
No. 1.	75 Gillette Pattern Blades .. 20 Auto Strop .. 5 Ever-Ready .. Bonus 10 Gillette Patt. ..	30/-	49/6	66%
No. 2.	230 Gillette Pattern Blades .. 60 Auto Strop .. 10 Ever-Ready .. Bonus 40 Gillette Patt. ..	90/-	£7 13 0	70%
No. 3.	455 Gillette Pattern Blades .. 120 Auto Strop .. 25 Ever-Ready .. Bonus 90 Gillette Patt. ..	180/-	£15 10 6	72%

Terms: 2½% discount or two approved references. Post paid.

EACH PARCEL COMPLETE WITH FULL RANGE DISPLAY SHOWCARDS, &c.
DARWIN MEANS PROFITS, NOW AND ALWAYS

Standardised retail price being 2/3 for 5, and 4/6 for 10.

PRICES ARE STRICTLY MAINTAINED.

A nation-wide continuous press-advertising campaign starts 30th September.

SPECIAL NOTICE TO WHOLESALE TRADE

These parcels will be supplied upon full wholesale discounts.

Write for particulars of special terms.

Take advantage these bonuses afford by ordering now.

The demand IS assured and so IS the profit.

LOUIS J. STAMBOIS,

THE SAFE SAFETY SERVICE

7 CHARTERHOUSE BUILDINGS,
LONDON, E.C.1 Phone—Clerkenwell 3518

Also at 34 CALL LANE, LEEDS,
and (for Free-State only) SOLWAY FRERES, (Agents and
Stock Depot), 11 FISHAMBLE ST., DUBLIN.

ALWAYS! Most Wonderful Word
Is Uppermost in our Policy—
**ALWAYS TO GIVE THE
BEST VALUE POSSIBLE**

We have no reason to regret it.

**THIS WEEK WE OFFER
GILLETTE BLADES**

Newest U.S.A. Stocks.
Regularly sold 31/8 per box.

1 Box, 29/- 3 at 28/6
5 at 28/- 10 at 27/6

Buyers interested bigger quantities
please write, stating quantity.

Special Line in Gillette Razors,
with Blade, 8/6 doz.; 96/- gross.

EVER-READY 31/- per gross,
Test Sets, with 6 Blades,
17/- per dozen.

VALET

36/- per Box, 3 Boxes at 34/3.

VALET RAZORS and SUNDRIES
at all-round Lowest Prices.
Send for our Special Illustrated Valet
Price List.

DURHAM-DUPLEX

1 Box of 12 packets, 20/- Each
2/6 packet is combined with a
Razor & Blade additional, value
2/6. 5/- value for 1/8 only.

Above prices are Nett.
Cash with Order.

Every other Blade, Razor, Strop, Shaver,
Shaving Brush and Soap in stock.
ALL YOUR RAZOR AND BLADE
REQUIREMENTS FROM—



DARWIN. The Blade with the Rustless Edges.
To fit Gillette, Auto-Strop, Ever-ready and Clemak Razors,
3/- per 4/6 packet of 10 Blades } or 30/- per box of 10 Tens
1/6 per 2/3 packet of 5 Blades } or 20 Fives.
Subject to 2½% discount.

YOU MAY ORDER ANY ASSORTMENT DESIRED.



SOUPLEX

IN PACKETS OF

5 for 1/3

Same Price Everywhere.

**SOUPLEX—
The 3d. Blade**

For Gillette Type Razors.

10d. per 1/3 packet of 5 Blades
1/8 per 2/6 packet of 10 Blades
or 20/- per Box of 12 Tens or 24
Fives. Subject to 5% discount.

DARWIN BLADES & SOUPLEX BLADES

Supplied to Wholesalers and Exporters at Best Wholesale Discounts.
Terms upon request.

**Be First—Not Last
in Distributing the
Ever-Ready "88" Set.**



Nothing Better at the Price.
3/- each. Dozen lots at 2/11.

Special Offer.

1 gross blades and 6 above Sets 49/-
2 gross blades and 12 above Sets 96/-

LOUIS J. STAMBOIS,

THE SAFE SAFETY SERVICE

7 CHARTERHOUSE BUILDINGS,
LONDON, E.C.1 Phone—Clerkenwell 3518

Also at 34 CALL LANE, LEEDS,
and (for Free State only) SOLWAY FRERES (Agents and
Stock Depot), 11 FISHAMBLE ST., DUBLIN.

Now DEALERS! This Special Bonus Offer is open until November 30th

*It will
pay you
to sell
more
Monkey
Strops*

Until November 30th we are offering one D.P. Bobber and one Douglas Pruner FREE with every dozen order of the Monkey Strop. With every half-dozen order we offer one D.P. Bobber or one Douglas Pruner. Two attractive showcards and advertising leaflets are provided with the dozen order and one showcard and leaflets with the half dozen.

In both cases your profit works out at approximately 62 1/2% on cost.

WILL YOU SELL MORE MONKEY STROPS AND INTRODUCE THE D.P. BOBBER (Ladies' Home Hair Bobber) AND THE DOUGLAS PRUNER (the Home Haircutter for Men) AT OUR EXPENSE? All three are lines which provide good value for the public and bring handsome profits for you. Increased advertising backs you up and creates sales. MONKEY STROP costs 45/- doz., retail at 5/6 each. Sent CARRIAGE PAID (6 and over).

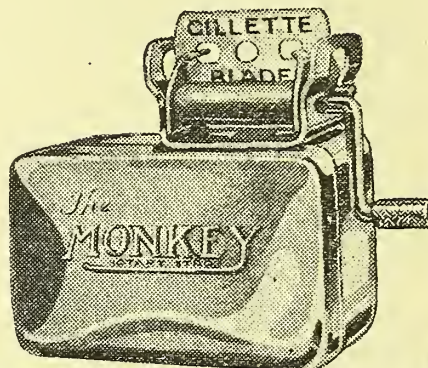
Send your Orders NOW to your usual wholesaler or direct to:

DOUGLAS KIRBY & CO., LTD.

(Dept. C.D.), 9/10 Charing Cross, LONDON, S.W.1

Telephone: 8063-4-5 and 3147 Gerrard.

Works: GLOUCESTER.



SCOTLAND

WILLIAM HILL & CO.

Agents for

PROPRIETARIES

Established 30 years.

Partners.

ROBERT HILL
GEORGE MILLER
J. B. ANDREWS, C.A.

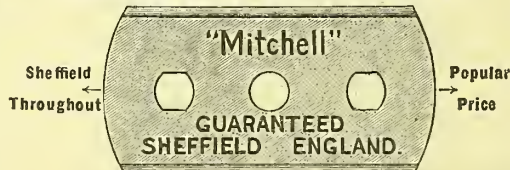
136 Renfield St., GLASGOW, C.2.

DEVILBISS
SPRAYS MEDICAL
— and —
PERFUME

27 Old Bond Street, London, W.
GERRARD 6867.

CHAMOIS SPONGES.
HOUSEMAIDS' GLOVES
CHAMOIS PADS.
Send for Price List
John T. Barradell, 23, Blackfriars Street, Manchester.
Phone: Manchester Central 2785. Wires: Sponges, Manchester

BRISTLES WITH STRONG POINTS.



LASTS LONGER WONDERFUL EDGE EVERY BLADE GUARANTEED
THE "MITCHELL" BLADE
1/6 (Made in Gillette and Autostrop Patterns) 3/-
for **50% Profit for You.** for
6 WE SUPPLY 12
TESTIMONIALS THAT TELL, SHOWCARDS THAT SELL.
R. S. MITCHELL, Unity Works, Langsett Rd., SHEFFIELD.

BUY BRITISH

The New Sheffield Steel

DARWIN

Safety Razor Blades

GILLETTE, AUTO-STROP & EVER-READY TYPES

Remember : They have
RUSTLESS EDGES

BONUS

Offers to Chemists for
30 days from Sept. 30th.

No. 1 Parcel £1 10 0 70 Gillette patt.
20 Auto patt.
10 Ever-Ready patt.

BONUS: 10 Gillette patt. Blades.

No. 2 Parcel £4 10 0 200 Gillette patt.
60 Auto patt.
40 Ever-Ready patt.

BONUS: 40 Gillette patt. Blades.

No. 3 Parcel £9 0 0 400 Gillette patt.
120 Auto patt.
80 Ever-Ready patt.

BONUS: 90 Gillette patt. Blades.

Applies only to British Isles and Irish Free States.



Sell at 5 for 2/3, 10 for 4/6

These prices will be strictly maintained.

Wholesale: 30/- box of 100

*Distinctive Window Show Material
with each Parcel. Send your order,
stating which parcel you require, to*

JOHN TIMPSON & Co., Ltd.

MEDICINAL AND CHEMIST-SUNDRIES

106 Golden Lane

LONDON, E.C.1

"PHONE :
CLERKENWELL 4778:

WIRES :
" POROUS BARB, LONDON."

THE LAST MONTH

For the DRUMMER Window Competition

Our offer of £100 for the best window display in connection with the £2,000 Prize Scheme ends this month! Don't let the chance of one of £290 worth of prizes slip through your grasp—get busy on that window—it will serve a double-fold purpose of attracting attention to your establishment and it may win you a prize in hard Cash.

If one of your customers wins the £2,000 you will get £50 for supplying the goods.



Photographs
of displays
must be sent
in before
Sept. 30,
1926.

SEND NOW

For full particulars to—
EDGES, BOLTON

B B

The "EMPIRE" HOT WATER BOTTLES

One Quality only—The Best,

Guaranteed for 2 Years.

No.
957



These bottles have stood the test of over thirty years' trade. Customers who have left us for cheaper goods have nearly always come back to us for the "EMPIRE" brand in which they can place implicit confidence.

PRICES.

Sizes in inches	6×8	6×10	6×12	8×10	8×12	8×14	10×12	10×14
"EMPIRE" Brand, HEAVY MAKE.								
Grey, rubber - each	3 0	3 2	3 4	3 8	4 2	4 6	4 9	5 3
Red " " - "	3 8	4 0	4 4	4 8	5 0	5 6	5 9	6 6

Each bottle in a strong paper bag with directions for use.

For orders of 3 doz. we will brand customer's name on each bottle, free of charge.

COVERS.

Sizes in inches	6×8	6×10	6×12	8×10	8×12	8×14	10×12	10×14
Scarlet or Grey Plush, each	1 2	1 4	1 6	1 7	1 8	1 10	2 0	2 3
Velour, assorted colours (washable) "	1 3	1 5	1 7	1 9	1 10	2 0	2 3	2 6

CARRIAGE PAID ON ORDERS OF £3 AND UPWARDS.

A discount of 5% for prompt cash is allowed on all amounts of 10/- and upwards. Money returned if goods are not satisfactory. Write for New Price Lists of Druggists' Sundries, Toilet Requisites, Rubber Goods, Cut Sheet Rubber Appliances, etc.

BURGE, WARREN & RIDGLEY, LTD. 91 & 92 GREAT SAFFRON HILL,
LONDON, E.C.1

**Clinical
THERMOMETERS**

J. Pillischer
88, New Bond St.
London, W.1

ESTABLISHED 1843

THE "SOMERSET" DOUBLE WARP

Crepe Bandages

Oldest British Manufacturers. Lowest Prices. Highest Qualities

SOLE MANUFACTURERS:

F. W. FOLKES & Co. Walbridge Avenue Mills, Frome, Somerset.

Ask for Sample
and Price.

Made
with your Trade
Mark & Guaranteed for 2 years

State quantity and en-
close Trade Mark
Sketch.

HOT WATER BOTTLES

Est.
1870. The
Largest Pri-
vate Firm in the Trade

Geo. MacLELLAN & CO.
Ltd.

Glasgow
Rubber Works,
MARYHILL, GLAS.

TRUCKS

FOR ALL PURPOSES

Send for
List No.
C.D. 823

W. B. STUBBS & SON (Estab.
1836)

Manufacturers of Trucks and Handcarts
of every description,

Progress Works, HAWKSWORTH, NOTTS

When ordering
SURGICAL DRESSINGS
specify

"WARDLE"

—the name that stands for
super-quality

(Wholesale and Export only)

The Wardle Range includes:

Absorbent Lint, Boric Lint,
Bandages, Gauzes, Gauze
Tissue, Cotton Wools, Coiled
Wool, Grey Wools, Capsicum
Tissue, Sanitary Towels,
Dental Gauzes and Napkins,
- - Hygienic Squares. - -

Bleachers of Bandage Cloths, Gauzes,
to the Trade. Also Absorbent Cotton.

THE WARDLE COTTON CO., LTD.

176/8 STOCKPORT RD., ARDWICK, MANCHESTER

Spinners and Manufacturers from the raw materials to the finished product

LONDON: 9 FORE ST. AVENUE, E.C. 2.

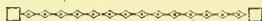
A word of thanks!

The Glasgow Chemists' Exhibition provided a much appreciated opportunity for us to renew acquaintance with many old friends.

It also gave us the opportunity of making the personal acquaintance of many new friends, and to one and all we tender our thanks.

We recognise that you had much to do in a limited time, and we trust that your visit was a profitable and pleasant one.

The many new packings, lines and ideas proved of such interest that we shall be glad to send details of these to any interested on receipt of a trade p.c.



EDWARD TAYLOR LTD.

SALFORD, MANCHESTER

'Phone: Central 4095 Manchester.
Telegraphic Address:
"Ceratum, Salford."

Wholesale and Export Manufacturers of
MEDICAL and SURGICAL PLASTERS

London Branch: 21 Ely Place, E.C.1

Contractors to
all Government
Departments.

'Phone: Holborn 4637 (London).
Telegraphic Address:
"Roborans Smith, London."

J. H. HAYWOOD, Ltd. Surgical Appliance Manufacturers

Castle Gate, NOTTINGHAM.

Established 1833

SPECIALITIES FOR WINTER.



ELASTIC HOSIERY (Seamed and Seamless), TRUSSES (Spring and Elastic), SUSPENSORY BANDAGES, BRACES, LADIES' AND GENT'S ABDOMINAL BELTS for support and warmth, made in felt, flannel and fleecy.



CHEST PROTECTORS, SLEEPING SOCKS, INDIA-RUBBER AND AIRPROOF GOODS, NURSING REQUISITES, DRUGGISTS' SUNDRIES, ETC.



PRICES ON APPLICATION

Surgical Rubber Goods

VENUS, OWL, GODIVA
& BALLOON BRANDS.

NOTICE.—Several instances of the sale of VENUS BRAND goods other than their make having been brought to the notice of Joseph Harris & Co., their Solicitors are instructed to take proceedings against anyone (Makers or Vendors) fraudulently using the name or design of VENUS or any imitation thereof in connection with Seamless Moulded Goods.

SEAMLESS MOULDED SURGICAL GOODS, PESSARIES, HOT WATER BOTTLES, URINALS FOR NIGHT OR DAY USE. Wholesale & Export Only.

JOSEPH HARRIS & CO., Rubber Works, Broadheath, Altrincham.

GOODRICH

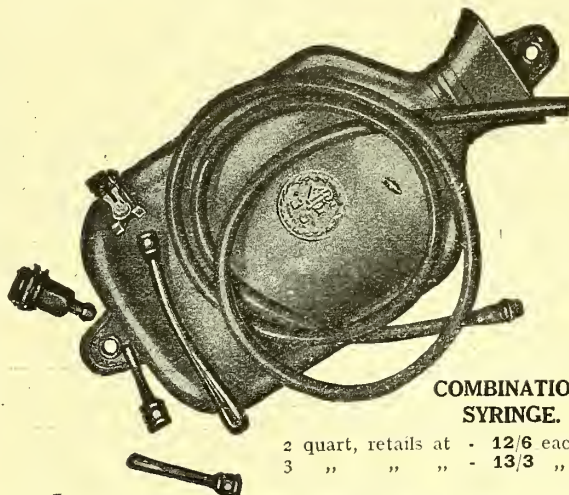
RUBBER SUNDRIES



THE "35" HOT-WATER BOTTLE.

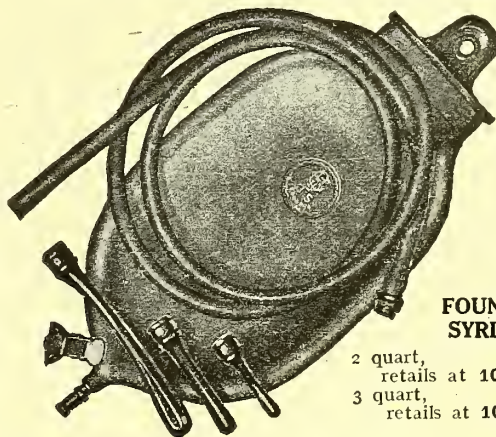
2 quart, retails at - - 7/6 each

3 " " " " - 8/3 "



**COMBINATION
SYRINGE.**

2 quart, retails at - 12/6 each
3 " " " " - 13/3 "



**FOUNTAIN
SYRINGE.**

2 quart,
retails at 10/- each
3 quart,
retails at 10/9 each

An Established Demand Built on Quality

GOODRICH No. 35. THE PIECE-DE-RESISTANCE OF THE GOODRICH LINE.

A red rubber bottle moulded by hydraulic pressure in one piece without seams. The rubber is specially compounded and of the exact thickness necessary to diffuse heat steadily and lastingly. Smooth surface, wide mouth funnel, rustless seal. A proprietary line that has sold consistently for 14 years in the United Kingdom. Branded with the *Manufacturers'* name and carrying the Goodrich Guarantee. A wonderful value, to retail at a popular price.

Goodrich Fountain Syringe and Combination Syringe.

Assembled with heavy walls, flush flow smooth tubing, shut off, and three genuine hard rubber threaded pipes.

DISTRIBUTORS TO THE WHOLESALE TRADE—

H. C. NORTH & CO., LTD., 42 SOUTHWARK STREET, LONDON, S.E.1

CHEMISTS CAN OBTAIN THEIR SUPPLIES THROUGH THEIR SUNDRY HOUSE.

H. GORDON (LONDON), LTD.

8 City Road, London, E.C.1

DRUGGISTS' SUNDRIES & SURGICAL RUBBER GOODS

WHOLESALE AND EXPORT ONLY.

Specialities: "GORDO" SOOTHERS IN EVERY STYLE

CARD 1, 2 and 3 DOZENS.



TRADE MARK

"GORDONIA" ALL RUBBER SOOTHERS

EACH IN CARTON.

"GORDONIA" RIBBED BOTTLE TEATS

EACH IN CARTON.

"GORDONIA" FEEDING BOTTLE OUTFIT

BOTTLE, TEAT, VALVE AND BRUSH COMPLETE IN BOX.

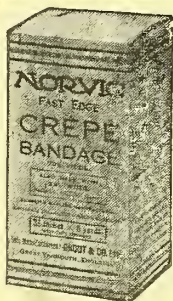
QUALITY UNSURPASSED.

COMPETITIVE PRICES.

APPLY FOR SAMPLES AND PRICES.

Telephone: Clerkenwell 1714 and 1715.

Telegrams: "Gordonotus, London."



Women are asking for these daily.

"Flesh Colour," practically invisible under silk stockings, appeal to all those who suffer from or fear varicose veins. Dainty, soft, washable and hygienic.

NORVIC
Regd.
CRÉPE BANDAGES

In 2, 2½, 3, 3½ and 4 in. widths, made up in neat packages for the counter.

Ask your wholesaler for the "Norvic" showcard with your supplies.

Sole Manufacturers:
GROUT & CO., Ltd.,

35 Wood St.,
London, E.C.2



Sells at Sight. Gives Satisfaction. Pays Well.

WHAT EVERY MOTHER KNOWS!

The **"EVERSAFE"**

BABY PACIFIER

is her favourite because it is safe, baby cannot pull it apart. Baby's delight, because of its natural resilient nipple.

Patented Everywhere.

REDUCED RATES—

No. 2. 4d. Line. 2/6 doz.

No. 2c. 6d. " 3/1 "

No. 2e. 6d. " 3/1 "

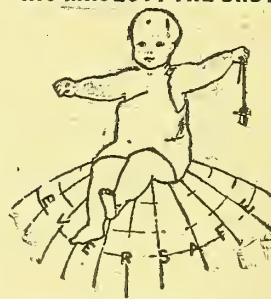
No. 3. 7½d. " 4/- "

Sample Order, 3 dozen assorted, sent 9/6 post free

All over the World

They are Acclaimed the Favourite of

HIS MAJESTY THE BABY



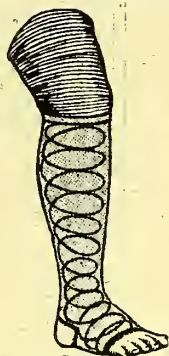
Obtainable from all Wholesalers or direct from Patentees.

F. SCHUTZE & CO. Ltd.

BLACK BULL WORKS, LONDON, N.7

SURGICAL HOSIERY

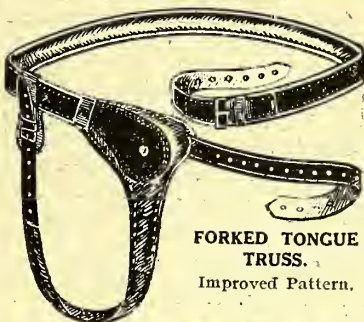
Seamed and Seamless.



CRÉPE VELPEAU BANDAGES

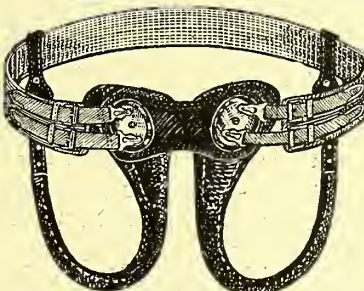
WE ARE SOLE AGENTS.

TRUSSES Spring and Elastic.



FORKED TONGUE
TRUSS.

Improved Pattern.

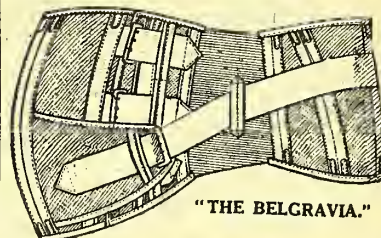


DOUBLE SCROTAL ELASTIC TRUSS.

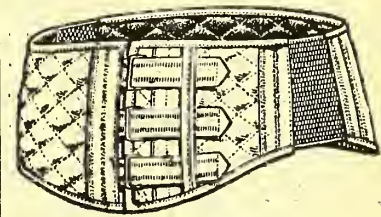
ANY PATTERN.

ALL QUALITIES.

ABDOMINAL BELTS ABDOMINAL SUPPORTS WOVEN ELASTIC CORSETS SUSPENSORY BANDAGES



"THE BELGRAVIA."



"THE LUMBAGO."

MANUFACTURED ON THE PREMISES AT CROWN ROAD WORKS.

THE R. H. HEWARD CO., SURGICAL APPLIANCE MANUFACTURERS :: TWICKENHAM.

For SUN, DUST, WIND & GLARE



ONE OF THE MANY NEW
ATTRACTIVE ASSORTMENTS OF

Willson Goggles

Containing 12 Pairs of High Grade
Goggles with assorted Fieuzal,
Amber and Smoke Glass.

Look for
the **WILLSON** name
on the frame

CATALOGUES

SENT ON REQUEST.
ALSO ANY INFORMATION
GLADLY GIVEN.

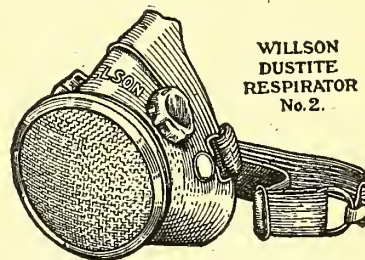


DISTRIBUTORS TO THE WHOLESALE TRADE:

S. PULZER & SON, Ltd., 45 Hatton Garden, London, E.C.1

Telegrams: "PULZONE, LONDON."

Telephone: HOLBORN 5288.



WILLSON
DUSTITE
RESPIRATOR
No. 2.

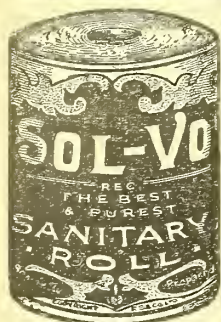
For Dusty Work and Spraying.

WILLSON DUSTITE
RESPIRATOR No. 2.
Dry Filter Model with 2 Relief
Valves.

WILLSON DUSTITE
RESPIRATOR No. 3.
Wet Sponge Filter Model,
with 2 Relief Valves.

Protection with Comfortable
Breathing.

SOL-VO SANITARY ROLLS & PACKETS.

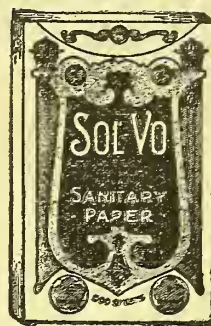


SOL-VO

REGD

THE BEST & PUREST

SANITARY PAPER



	per doz.
Three dozen Rolls ...	7/- net.
Half gross " ...	6/6 "
One gross " ...	6/- "
Five gross " ...	5/3 "

	per doz.
Three dozen Packets ...	10/- net.
Half gross " ...	9/6 "
One gross " ...	9/- "
Five gross " ...	8/3 "

CARRIAGE PAID.

CASES FREE.

FORD, SHAPLAND & CO. Ltd.

LABELS & SHOWCARDS — PRINTERS — CARTONS & ENVELOPES,
GT. TURNSTILE, HIGH HOLBORN, LONDON, W.C.1.

TELEGRAMS: FORSHAPCO. WESTCENT. LONDON.

TELEPHONES: { HOLBORN
5503 & 4731

Zeal's CLINICAL THERMOMETERS

are

BRITISH MADE

by

BRITISH LABOUR

from

BRITISH GLASS

and

**'GUARANTEED
PERMANENTLY ACCURATE**

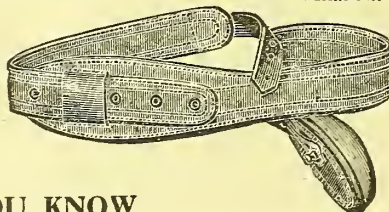
G. H. ZEAL, LTD. 75 & 77 St. John Street
—LONDON, E.C.1—

The "Hernicura"

"COMFORTABLE"

Reg. No. 627925.

Patent No. 23241.



YOU KNOW

how often you have trouble in fitting customers with trusses, and how frequently dissatisfaction is expressed.

TRY

the "Hernicura" Trusses. They are easy to fit, possess great adaptability, give absolute satisfaction, and yet are most reasonable in price.

A 33 inch Truss will adjust from 30 to 36 inches.
Head is also adjustable.

Write for Price List.

Specimens on appo.

MORGAN-DAVIS & SONS LTD.

Truss and Surgical Appliance Makers

276-278 BISHOPSGATE, E.C.2.

Phone:
Bishopsgate 2417.

DON'T MISS
10/6 Cash BONUS
on
Sloan's
LINIMENT

WE are offering for a 14 days' window display of SLOAN'S LINIMENT, made with goods and New Season's display material before December 10, 1926, **10/6 CASH PAYMENT** to those placing order for 6 dozen or one gross SLOAN'S LINIMENT (limited to one Bonus).

Shows 40·1 % Profit

**On Cost,
Buying on Best Terms.**

AVAILABLE ONLY UNTIL OCTOBER 25th.

Full particulars now being mailed to the entire Trade, or write :

FASSETT & JOHNSON, LTD.,
86 Clerkenwell Road, LONDON, E.C.1.

Telephone—VICTORIA 7533 (4 lines).

Telegrams—"Dicotto, Sowest, London."

W. B. DICK & CO., LTD.
26 Grosvenor Gardens, London, S.W.1
Works : LONDON, LIVERPOOL, GLASGOW

PARAFFINUM LIQUIDUM B.P.

S.G. 890/5. Guaranteed to remain bright at 0°C.

White and Half White Oils
B.P. White and Yellow Petroleum Jellies

QUOTATIONS & SAMPLES will be sent on application.

ADEPS LANÆ, P.B.

THE FINEST BRITISH LANOLINE PRODUCED

IS MANUFACTURED BY

THE PHARMACEUTICAL LANOLINE CO.

Carnwath Road, Fulham, London, S.W.6.

Telephone : Putney 42.

WHO INVITE ENQUIRIES. Telegrams : "Batapo, Walgreen, London."

THE METHYLATING Co., LTD.
for METHYLATED SPIRIT.

KINNAIRD HOUSE, Pall Mall East, LONDON, S.W.1.

Telephone : Regent 5621.

Telegraphic Address : "Methcolim, Phone, London."

Russian Medicinal Paraffin

BULK AND PACKED.

PHARMACEUTICAL CHEMICALS

**REDDGRAVE BUTLER & CO.
LIMITED,**
Forest Lane, STRATFORD, E.15



NECTAR CREAM (Regd. Brand) OLIVE OIL



The BEST the World Produces

To those who appreciate **QUALITY**,
Nectar Cream appeals irresistibly, as
hundreds of regular users can testify.
Chemists **NEED** the **BEST**.

Write for samples and prices of bottles, cans, and casks, to Sole Importers

RAYNER & CO., LTD.
NORTH ROAD - LONDON, N.7

PARAFFINIUM LIQUIDUM B.P.

HALF-WHITE OILS,
TRANSFORMER OILS

TECHNICAL WHITE OILS

PETROLEUM JELLIES SNOW WHITE BP AND NATURAL WHITE BP

Pure Russian White Oils

HARDING, HOLLAND & FRY, LTD.
52 QUEEN VICTORIA STREET, LONDON, E.C.4.

Telegrams: "Seedtime, Cannon, London."

Telephone: City 590 (2 lines).

PETROLEUM JELLY

Best qualities Yellow and White B.P., Red Veterinary and Green.

GOUGH, KIDSTON & CO.
43/45 Gt. Tower Street, London, E.C. 3

Tel. No.: Royal 2666 & 2667.
Tel. Add.: Kidstonism.

Also **GUM ARABIC** and **TRAGACANTH**
BEESWAX and **JAPAN WAX.**

Works: Bermondsey.
Tel. No.: Hop. 2029.

An absolutely pure spirit!

WATNEY'S GRAIN SPIRIT DOUBLY RECTIFIED

for

**MANUFACTURING CHEMISTS
& DRUGGISTS, PERFUMERS, Etc.**

This high-grade spirit is odour-free and can be used medicinally. It exceeds all B.P. requirements, and has withstood the most stringent tests known to the pharmacist.

JOHN WATNEY & Co. Ltd.

THE DISTILLERY, YORK ROAD, WANDSWORTH, S.W.18.

ESTABLISHED NEARLY A CENTURY.

PETROLEUM JELLY
("SALVO PETROLIA")
BRAND

THE PERFECTION OF PETROLEUM JELLY.
MANUFACTURED SOLELY BY

THE DEE OIL CO. LD.

D 23 & 24 EXCHANGE BUILDINGS
LIVERPOOL

TELEPHONE -
CENTRAL 3859

TELEGRAMS -
"CESTRIAN"

LONDON OFFICE
11 POULTRY, CHEAPSIDE, E.C.2. PHONE: CITY 8455

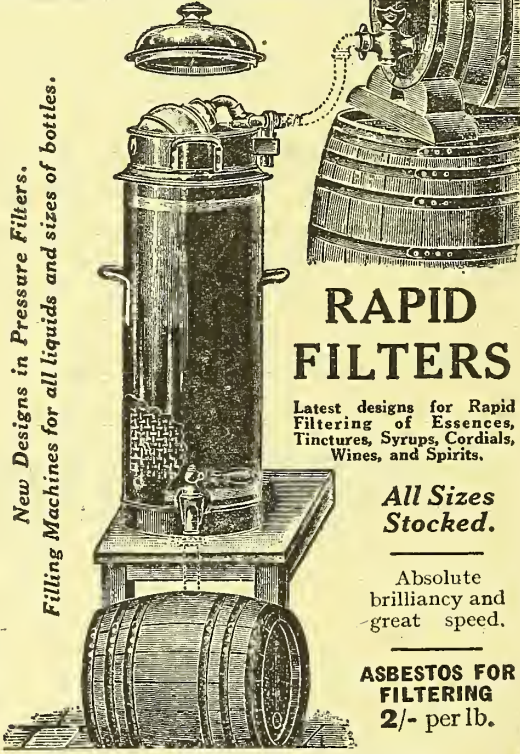
PACKED IN BARRELS, KEGS OR
SMALLER PACKAGES IF DESIRED.

OTHER GRADES OF
PETROLEUM JELLIES, WHITE BASES ETC.
WHITE OILS B.P. & Technical Qualities

SAMPLES & PRICES ON APPLICATION

OLEUM DEELINÆ (DEE OIL)
THE UNFAILING CURE FOR ECZEMA.

*New Designs in Pressure Filters.
Filling Machines for all liquids and sizes of bottles.*



**RAPID
FILTERS**

Latest designs for Rapid
Filtering of Essences,
Tinctures, Syrups, Cordials,
Wines, and Spirits.

**All Sizes
Stocked.**

Absolute
brilliancy and
great speed.

**ASBESTOS FOR
FILTERING
2/- per lb.**

JNO. P. JACKSON & CO., LTD.
POWELL SQUARE, LIVERPOOL

PETROLEUM JELLIES

Medicinal

LIQUID PARAFFIN

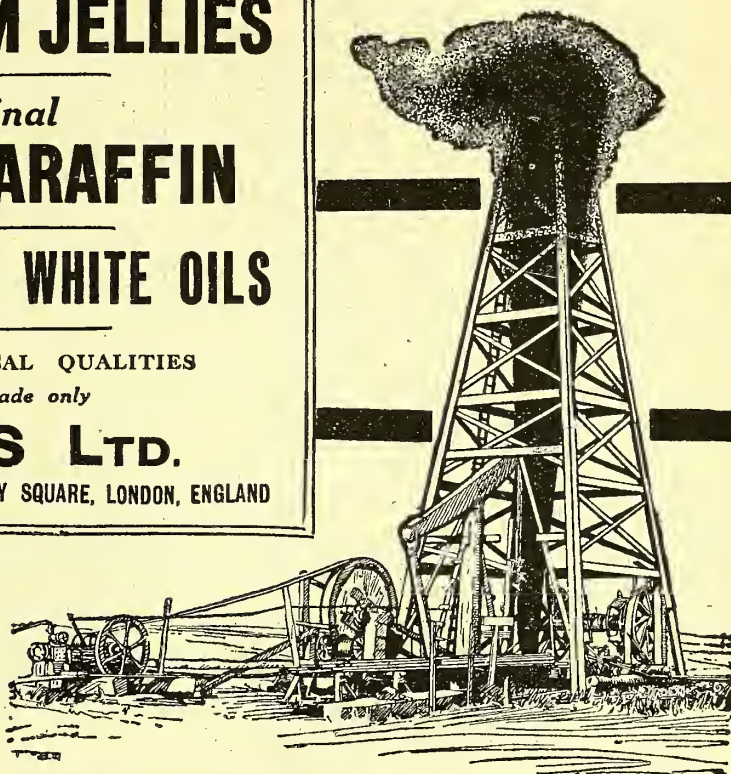
WHITE & HALF WHITE OILS

B.P. AND TECHNICAL QUALITIES

Wholesale Trade only

STERNS LTD.

80 ROYAL LONDON HOUSE, FINSBURY SQUARE, LONDON, ENGLAND



Petroleum Jelly

White, Yellow, Amber,
& Ruby Red, for all
Pharmaceutical and
Veterinary purposes

MEADE-KING, ROBINSON & CO., LTD.

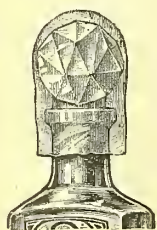
Liverpool - London - Manchester - Birmingham - Leeds

"WALO"

Self-Fixing, Hermetic BOTTLE-CAPS

Large Stock.

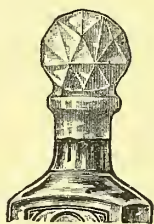
OPAQUE AND TRANSPARENT.
WHITE AND ALL COLOURS.



When wet.

ORDINARY,
BRILLIANT,
and
SILK-FINISH.

From 1/4" up
to 4" dia.



When dry.

BRUCE, DAWSON & COMPANY

70 Finsbury Pavement, London, E.C.2.

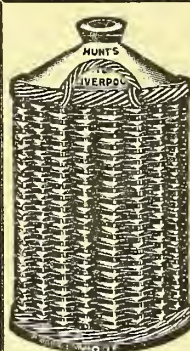
Telephone: Clerkenwell 4857. Telegrams: "Brudako Ave London."

Well-assorted Stocks of all kinds of BOTTLES and JARS

Send us your enquiries for
STOPPERED PERFUMES, plain & frosted.
ESSENCE BOTTLES, round & oval, etc.
and all kinds of Bottles for Christmas Trade.
PROMPT DELIVERIES. LOW PRICES.

We shall be pleased to send you our Current Price List
Write or 'phone (Central 2430, 5 lines and 2 private lines).

L. LEPERSONNE & Co.
99 CANNON STREET - LONDON, E.C.4.
(Strictly Wholesale. Original case lots only.)



PLAIN and WICKERED

STONE

BOTTLES & JARS

FOR SPIRITS, ESSENCES,
CHEMICALS, ETC.

HUNT'S Limited

Stoneware Manufacturers,

Tel.: 426 Royal.

33 Henry Street, LIVERPOOL

Tin Canisters

OF EVERY DESCRIPTION

Well finished Tins in all shapes
and sizes.

WRITE TO-DAY FOR PRICES,
HORNBY & CO. (Hull) Ltd.
38 HIGH STREET, HULL.

THE STANDARD GLASS & HARDWARE CO., LTD.

BOTTLES
and JARS

CHEMICAL
GLASSWARE

MEDICAL and SURGICAL
GLASSWARE

SODA FOUNTAIN GLASSWARE
ICE SHELLS all kinds

STRICTLY
WHOLESALE ONLY

26 FINSBURY SQUARE, LONDON, E.C.2.

Telephone:
Clerkenwell 1772

FREDK. YOULDON

(Formerly Proprietor of E. Youldon. Established 1840)

68 BASINGHALL STREET LONDON, E.C.2

Phone:
London Wall 3529.

Telegrams:
'Youldon, Ave, London.'

Enquiries and orders for
ALL KINDS OF

GLASS BOTTLES

will receive immediate attention.

Don't use COMMON BOTTLES

*There is nobody so fastidious
as an Invalid. Cater to his
fastidiousness by turning out
your prescriptions in the best
possible style.*

*There is no better help than
a smoothly finished, bright,
attractive bottle.*

Buy BEATSON'S BOTTLES

ESTABLISHED 1751.

Beatson, Clark & Co., Ltd.
ROTHERHAM GLASS WORKS,
ROTHERHAM.

BOTTLES

OF EVERY
DESCRIPTION

Wholesale & Export Only

We make good

BOTTLES

—hand or machine made.

Large and well-organised
works enable us to meet
your immediate require-
ments for:—

**DISPENSING, EMULSION,
COUGH MIXTURE,
SAUCE, EMBROCATION,
FEEDING BOTTLES, &c.**

*Our prices are right—
and our Bottles are
British manufacture.*

Make us your standard
Bottle suppliers—we can
meet your every need.

LAX & SHAW

LIMITED

ALBERT GLASS WORKS
HUNSLET, LEEDS.

*Belinda Glass Works, Hunslet. Clarence Glass Wks. Hunslet.
Telegrams: "Feeders, Leeds." Telephones: 27047, 23080, Leeds.*

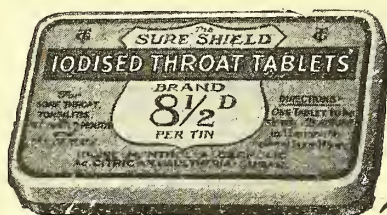
LONDON DEPOT:
1 SWAN STREET,
MINORIES, E.1

Telephone: AVENUE 6255.

THE SURE SHIELD



IODISED THROAT TABLETS



8 1/2 d. Tins

5/6 per doz. 63/- per gross

1s. 3d. Tins

9/6 per doz.

108/- per gross

THOS. GUEST & CO., LTD., CARRUTHERS STREET,
ANCOATS, MANCHESTER.

Venesta

Collapsible Tubes

Lipsalve Cases, Sprinklers, etc.

Made in Pure Tin, Lead,
or Lead coated with Tin,
Plain or Enamelled, and
printed with designs to suit
customers' own requirements

Manufactured by

Venesta Ltd.
1, Great Tower St., EC3
London, England

Telephone:
ROYAL 4200
(6 lines).

Telegrams:
"Venesta, Bilgatai
London."

Tubes, etc., are manufactured to Customers' own specification



POTTER & CLARKE

60/64, ARTILLERY LANE LTD
LONDON, E.1.

Telegrams:
"Horehound, Phone, London."

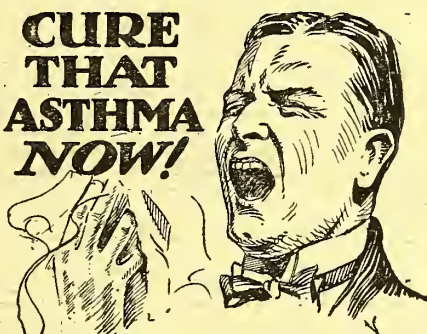
Telephone:
Bishopsgate 1033-4-5.

MANCHESTER: 24 LUNA STREET, GREAT ANCOATS

POTTER'S ASTHMA CURE

Have stocks ready for the Winter months
by ordering now either direct or
through your usual Wholesale House.

**CURE
THAT
ASTHMA
NOW!**



IT will speedily surrender to
Potter's Asthma Cure and re-
lieve you of the intolerable
irritation. Throat and nasal affec-
tions of all kinds are soothed and
cured by the magic effect of this
proved remedy.

Out of doors smoke Potter's
Smoking Mixture & Cigarettes.

1/6 per tin from all Chemists, or 1/9,
post free, from

POTTER & CLARKE, LTD.,
ARTILLERY LANE, E.



A specimen Newspaper Advertisement.



POTTER'S ASTHMA CURE

P.A.T.A. 1s. 6d.

14/- doz.

POTTER'S ASTHMA CIGARETTES

P.A.T.A. 1s. 6d.

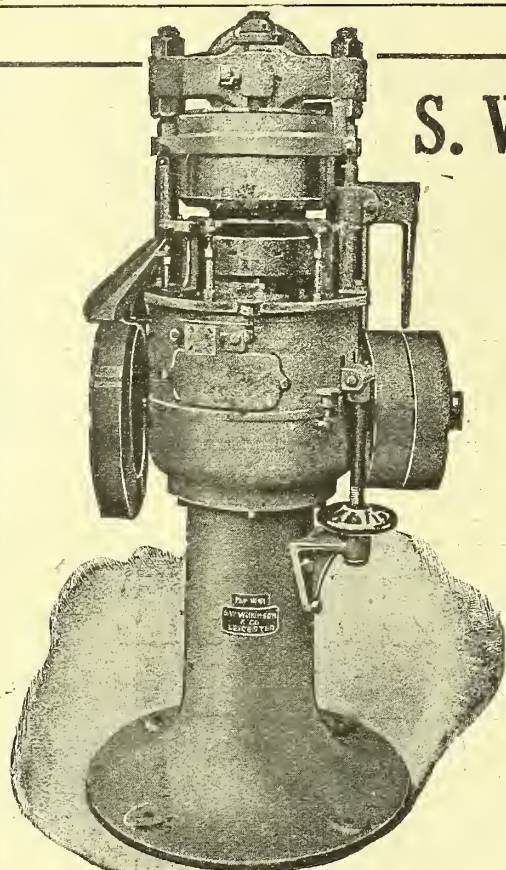
14/- doz.

POTTER'S ASTHMA
SMOKING MIXTURE

P.A.T.A. 9d.

7/- doz.

Widely advertised at Home
and Abroad.



S. W. WILKINSON & CO.

WESTERN ROAD, LEICESTER.

Rotary Tablet Machines

These Machines are now made in 4 sizes :

- 12-Punch Ordinary for Tablets from $\frac{3}{8}$ " to $\frac{7}{8}$ " diameter.
Output 400 per min.
- 20-Punch Ordinary for Tablets from $\frac{1}{4}$ " to $\frac{1}{2}$ " diameter.
Output 700 per min.
- 12-Punch Heavy for thick Tablets and Blocks
1" diameter. Output 250 per min.
- 18-Punch Heavy for thick Tablets and Blocks
1" diameter. Output 400 per min.

LISTS ON APPLICATION.

SINGLE punch machines made in 5 sizes for tablets from $\frac{1}{8}$ " to $1\frac{1}{2}$ " diameter, also lozenges.

MACHINES FOR BATH SALT TABLETS

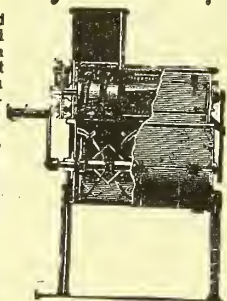
This gives a thorough mix-up

A Gardner "Rapid" sifter and mixer will thoroughly sift and mix $\frac{1}{2}$ oz. of one ingredient with a 30-lb. mixture of dry powders at one operation, and "every pinch of the whole will show its presence"—a customer's statement.

Write us for list of Ball Mills, Disintegrators, Millstones and Mills, Drum Sieves, Drying Machinery, etc.

WM. GARDNER & SONS LTD.
(Gloucester)
Bristol Road, GLOUCESTER.

Phone 117. 'Grams : "Gardner," Gloucester

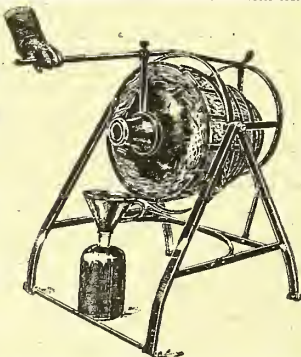


CARBOY STAND AND TILTER.

For drawing off small quantities of acids, etc. from Carboys, with ease and safety.

The Carboy can be tipped to any position with one hand.

R. & H. LEIGH & SONS, LIMITED.
Carboy Hamper Manufacturers,
BOLTON.



Ask for "PAZO"

PILL BOXES

The most convenient and secure Pill Box obtainable.

NO LOOSE BOTTOMS

Samples and Prices on application

The "PAZO" CO., Oldbury

X CARTONS X
& DISPLAY OUTERS X
BOXFOLDIA LTD
BIRMINGHAM
SPECIMENS ON RECEIPT OF POSTCARD

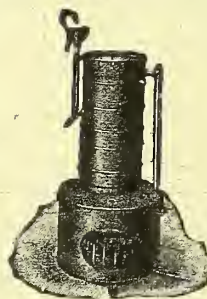
DISTILLED WATER

Brown's Stills are perfectly automatic. Can be run night and day without attention. Patented in U.K. and Continental Countries.

Extraordinarily efficient and economical. Made for gas, steam, oil or coke fire heating.

Full particulars and prices free on application

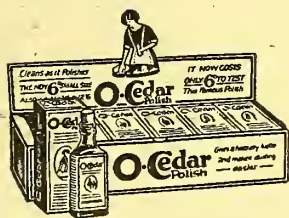
BROWN & SON,
Alembic Works,
Wedmore Street, Holloway, N.19



The New 6^d size O-Cedar Polish



Offers special trading opportunities to all Chemists.



This attractive Counter-Display Carton

makes a very strong selling appeal. Contains one dozen 1½ oz. bottles of the new 6^d size O-CEDAR Polish. A very good method of introducing O-CEDAR Polish to your women customers.

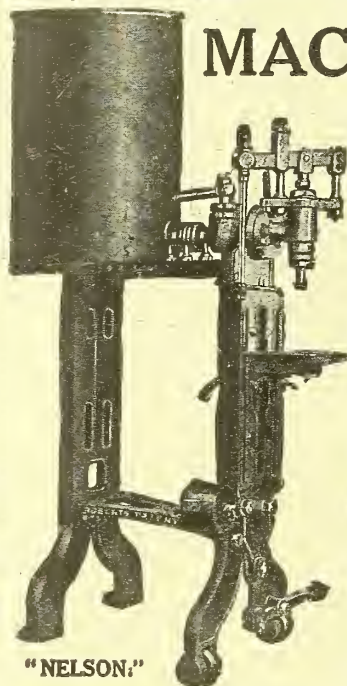
The new 6d. size O-CEDAR Polish shown here will be one of the main features of our Autumn Advertising Campaign, the largest we have ever undertaken.

All Chemists should stock this new and profitable line. The profits to be made are generous and evenly spread over the whole year. O-CEDAR Polish is always wanted in the house, which gives the Chemist the opportunity to establish a growing trade.

Chemists are invited to write for Trade terms and full particulars, and supplies of Showcards, Window Bills, and Display Stands.

O-Cedar Ltd., Slough, Bucks

ROBERTS' ORIGINAL PATENT BOTTLE-FILLING MACHINES



"NELSON."

Don't waste money on imitations, buy Roberts' Machines which actually Created the Records for

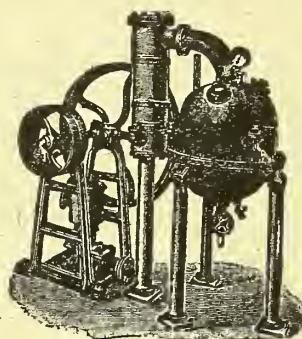
**CLEANLINESS
SIMPLICITY**
and Rapidity in
Bottle Filling.

*Write for new
Price Lists.*

NOTE the Address :
**ROBERTS' PATENT
FILLING MACHINE CO.
33 ROUNDCROFT ST.
BOLTON.**

Our latest patent
"Alpha," price £12,
will fill 10 gross bottles
per hour.

*Write for Particulars.
All Rights Reserved.*



**STILLS, VACUUM STILLS, VACUUM PANS.
EVAPORATING PANS.**

**AUTOClaves AND DIGESTORS.
SPECIAL APPARATUS AND PLANT
FOR MANUFACTURING CHEMISTS.**

**SOLE MAKERS of BENNETT'S PATENT 'IDEAL'
ANNULAR FILM CONDENSERS,
SHEARS' PATENT MULSER.**

BENNETT, SONS & SHEARS, LTD.
ENGINEERS & COPPERSMITHS

43 & 44 Shoe Lane, LONDON, E.C. 4. 1.

BEETLES.

Will Retailers kindly supply for this Pest
FARMER'S "BAITED" PHOSPHOR PASTE

It is a wonderful destroyer and A.1 Rat and Mouse Poison.

Please Keep Supplies and Recommend.

Proprietors: **F. FARMER & CO., 1a College Lane, Homerton, E.9**

Sherleys



LACTOL &c.

(P.A.T.A.)

These preparations command a ready sale, and are by far the largest advertised of any on the market. They are protected at prices that leave a good margin of profit for the retailer, and the terms on which they are supplied preclude any possibility of loss. We have an excellent range of literature and show cards, and do all in our power to assist chemists by referring mail customers to them. **WRITE FOR NEW PRICE LIST AND TERMS.**

**A. F. SHERLEY & CO., LTD., 18 MARSHALSEA ROAD,
LONDON, S.E.1.**

Tel. No. : Hop 1897.

Telegrams : "Sherleydom, London."

ZEISS REFLECTOR LAMPS

Turn Expense into Profit

A small expenditure on efficient fittings will purchase the double benefit of reduced electric lighting accounts and increased custom.

**LIGHT YOUR SHOP
ATTRACTIVELY**

Full particulars in list B78 on request from

The British Representatives :

**J. W. ATHA & CO. WINSLEY HOUSE, WELLS ST.,
OXFORD STREET, LONDON, W.1**

NURSE HARVEY'S MIXTURE

A safe, simple and reliable remedy for Children's Ailments is advertised so extensively in the daily and weekly Press as to bring mothers to the retailer without effort on his part.

The selling has been done before the mother reaches the chemist, and, having supplied her, it is only common sense to claim she will buy other family necessaries from him. Moreover, the continuous demand for it produces a quick turnover.

For Direct Terms apply to—

OSCAR SCRUTON & CO., YORK



Keep your business young

IT'S a fine thing to know that your customers have remained loyal to you year after year as your Business has grown. But as your older customers' tastes and requirements alter in the passage of years, it's a dangerous thing to let your Business grow old with them. Keep your Business young—don't overlook the requirements of Youth—let your Business be not a day older in spirit than your youngest customer.



Just the thing for Frocks and Dainty Lingerie.

Good trade should be done in this line now by recommending it for this purpose to your customers. Recognised as the finest cold water dyes in the world for delicate and costly fabrics. Good results obtained even at the first trial. A certain seller.

'LUTON'
HOT WATER FABRIC
DYES

The best hot-water dyes for all materials, giving perfect results with the minimum of trouble. As with all other Whitaker products, they show a good profit.

LUTON STRAW HAT DYES and AURORAL COLD WATER DYES with their gay colours and possibilities have an irresistible appeal for Youth. Keep a good stock of them—give them a good show—let Youth know that *you* know and sell what Youth requires.

'LUTON'

STRAW HAT DYES

The outcome of 45 years' accumulated experience in the manufacture of household dyes. This series comprises all colours and is in demand practically all the year round. They are all highly efficient dyes and appeal to every woman on economical as well as fashionable grounds. Supplied in dull or glossy series.

VELT

THE NEW CLEANER

A cleaning preparation for removing stains, grease, dirt, etc., from clothing, upholstery, curtains, etc., and renovating them. VELT is a non-inflammable liquid and is supplied in screw tins of which three dozens are contained in an attractive outer. A new Whitaker product, but nevertheless one which is already selling well. It is now available in 5-oz., 10-oz., and 20-oz. tins for the convenience of bigger users.

ALL CASES AND CONTAINERS FREE.

WHITAKER & CO. Dye Specialists for Chemists, **KENDAL**

Telegrams: "Dullette, Kendal."

(Established 1878.)

Telephone 214.

London Office
and Showrooms:

16—18 Beak Street, REGENT STREET, W.1.

Corrugated **PAPER BOXES & PACKINGS**

**ROLLS
BOXES
PIECES
PARTITIONS
&C.**

for all purposes.

Corrugated
Packing
Materials
Co., Ltd.

**4, AMBROSE ST.,
WEST GORTON,
MANCHESTER.**

QUALITY!

*Times may alter
And changes befall,
But Quality will stand
In spite of them all.*

WE attribute our success to Quality. We maintain a high standard of efficiency in the production of our goods. These are predominating factors essential to the success of the chemist.

Write us for Samples.

PRINTING

ALF. HARRISON & SONS, Ltd.,

Chemists' Printers,

**BURLEY ROAD,
LEEDS.**

TELEPHONE:
HEADINGLEY 51974

TELEGRAMS:
"IDEAS," LEEDS.

London Office :—

**SENTINEL HOUSE, SOUTHAMPTON ROW,
LONDON, W.C.1.**



GLASS - MAKING
 an old craft aided by modern science.

CONTAINERS
 in art colours for
PERFUMES,
COSMETICS,
& BATH
CRYSTALS.

designed and made by
WOOD BROS. GLASS COMPANY Ltd
 Barnsley, England.
Established 1828.



FAIRY DYES

Mean Greater Turnover for You—and Absolute Satisfaction for Your Customers.

THERE is no more attractive line on the market to-day—there is no better seller—and no article has made larger strides in popular favour.

FAIRY DYES

are now sold in glass tubes, encased in smart, clean-looking "safety-first" cartons. They are retailed at 2d. each, made in 25 popular shades and colours, and are extensively advertised in the right publications.

You can rely upon Fairy Dyes—for prompt delivery in any quantities—for fresh stocks—for quick, easy-to-handle, clean turnover, and as tried favourites your customers are always satisfied. See that you are supplied without delay.

For Trade Terms and particulars write to

FAIRY DYES, LTD.,

61 WELL ROAD
GLASGOW.

London Depot - - - - - 292 UPPER STREET, ISLINGTON, N.1.

VISKAP
BOTTLE
(APS)

The
ORIGINAL-BEST
and
ONLY BRITISH MADE.

SELF-FIXING, HERMETIC,
TRANSPARENT, OPAQUE, COLOURED.
IMMEDIATE DELIVERY
FROM THE MANUFACTURERS.

VISCOSE DEV. CO. LTD. BROMLEY KENT.

**LADDERS, STEPS,
TRESTLES, TRUCKS
HEATHMAN**
35, Aldersgate St., Near G.P.O. LONDON.

BOOKS AND PROSPERITY.

Send us a post card and we will send you our new 32-page catalogue listing practically all the current books of American publishers of interest to the average druggist. Among the subjects covered are: Professional, commercial, and manufacturing pharmacy, formulas of all kinds, advertising, window-trimming, show-card writing, the soda fountain and the luncheonette.

Spatula Pub. Co., 10 Alden St., Boston, Mass., U.S.A.

LYSOL

BATTLE'S SUPERFINE GRADE

Absolutely Water-white in all dilutions.
Does not burn the skin or cause irritation.
Finest packing in attractive Cartons.

Sell the best and give your
customers constant satisfaction

Guaranteed 50% Cresols min.
Rideal-Walker Co-efficient of 3.
Own name for Chemists' Trade.

Also BATTLE'S SANITARY DISINFECTANT FLUIDS

For the Home, Farm, and all General Purposes.

Approved for use under the Diseases of Animals (Disinfection) Order of 1926.

BATTLE, HAYWARD & BOWER, Victoria Chemical Works, LINCOLN.

NEW SEASON'S ADVERTISING CAMPAIGN Lakerol

The World-Famous Bronchial Pastilles.

The sales of Lakerol will be vastly increased during the coming Autumn. The public know the value of Lakerol, and they will be still further convinced by the huge advertising campaign now commencing.

**ADVERTISING
THAT MAKES
YOUR PROFITS
BIGGER**

The principal London Dailies and the morning and evening journals in most Provincial towns are being used to advertise Lakerol. Special prominence is being given to the Lakerol Competition Scheme which is already widely popular. Space has also been taken on the Tubes and Omnibuses. Are you ready to meet the demand?



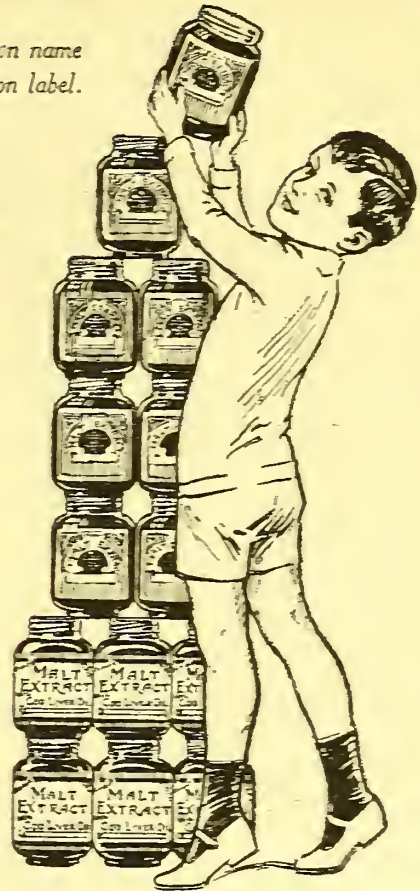
**SELL AT
1/3 PER
TIN**

**TRADE TERMS
11 3 per dozen—
Carriage Paid**

Packing free. 25%
for cash with order of
S.G.L. Otherwise net
cash in 14 days.
Boxes of 1 doz. with
each 1 gross, and
boxes of 2 doz. if
within or counter
display is given for
14 days.

Pastilles Ltd., 124 High St., Shoreditch, London, E.1

*Your own name
printed on label.*



**A
PHILIP JOSEPHS
& SONS LTD.
SHOWCASE
QUICKLY EARNS
ITS COST.**

Try One!

93 OLD ST., LONDON, E.C.1.

Phone—2151 Clerkenwell. Wires—"Josephs London."

"A Tower of Strength"

"EDME"

**EXTRACT OF MALT
WITH
COD LIVER OIL**

A perfect blend of Malt Extract made from selected barleys only and the finest Norwegian Cod Liver Oil obtainable. Best that science and money can produce.

**Guaranteed absolutely pure
and free from preservatives.**

Write for full particulars and prices.

EDME LTD.

Broad Street House, London, E.C.2.

Telephone:
London Wall 5919.

Telegrams:
"Edme. Ave. London."



WM. WARNE & CO. LTD.

29 GRESHAM STREET, E.C. 2.

India Rubber Manufacturers,

Surgical, Chemical, Domestic Articles, Syringes,
Water Beds, etc.



FRED K. FINK & CO.

10 & 11 MINCING LANE, LONDON, E.C.3.

GUMS, ARABIC and TRAGACANTH as Imported or
Finely Powdered. :: SHELLACS ALL GRADES.



Those First Grey Hairs
appear just

here

Touch them up with
TATCHO-TONE



Medical Guaranty with bottle. Chemists Prices 2/6 & 4/6
or direct to the Tatcho-Tone Co., 5, Gt. Queen St., W.C.2



SHADEINE

For COLOURING GREY HAIR

This popular article is largely advertised
and stocked by all Wholesale Houses.
Trial size 8d. per doz. . . . 6/-
1/4 size, per doz. . . . 12/-
1/2 size, per doz. . . . 24/-
3/4 size, per doz. . . . 38/-

The SHADEINE CO., 58 Westbourne Grove, London, W.2.

TALCUM POWDER FACE POWDER VANISHING CREAM

Any Grade.
Any Colour.
Any Perfume.
Any Quantity.

All Merchandise in Bulk or in your own Containers.
The O-PINE-O Manfg. Co. Ltd., Montague Rd., Hornsey, London, N.8

SWAN-DOWN!!!

HEAR
SOMETHING EXTRA

From our Representatives or from us.

J. C. Gambles & Co., Ltd. 211-215
BLACKFRIARS RD., S.E.1.

FRIZZETTA KEEPS THE HAIR IN CURL 2/- PELLETTA FOR THE COMPLEXION 1/4 3/3 SE-TABA TABLETS THE NEW NERVE TONIC 1/3 3/-

TEST TERMS. 3 DOZEN ORDERS ASSORTED, CARRIAGE PAID.
ALL WHOLESALE HOUSES. P.A.T.A.

Maker: F. W. BATES, Brooks's Bar, MANCHESTER.

SHAMPOO POWDERS. VANISHING CREAMS.

FACE
POWDER
All Tints.

LET US SUPPLY YOU IN BULK, OR IN
PACKAGES UNDER YOUR OWN LABEL.

TALCUM
& TOOTH
POWDERS.

MESSAGE CREAMS, &c.

SAMPLES AND
QUOTATIONS FROM:— **THE PERFUMERS' SUPPLY CO.**
207 UPPER THAMES STREET, LONDON, E.C.4.

THE PRESCRIBER

Will keep you closely in touch with all
developments in the Newer Remedies.

Annual Subscription 20/- post free anywhere.
Half Year—July to December, 12/6 post free.

Through any Medical Bookseller, or direct from:—
"THE PRESCRIBER" Offices, 6 South Charlotte St., EDINBURGH.

THE MANCHESTER SCHOOL OF PHARMACY

Founded 1882

292 OXFORD ROAD, MANCHESTER.

Principal: H. BRINDLE, B.Sc.Hons.(Lond.), A.I.C., Ph.C., F.C.S.

Prospectus sent post free on application.

Immediate Delivery at last

ALL ORDERS NOW BEING
EXECUTED WITHOUT DELAY.

VANORÉ LTD. 4-6 MUSWELL HILL ROAD,
HIGHGATE, N.6.

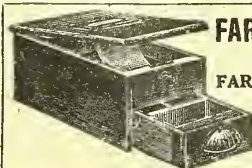
C. & D. Stock-Taking Sheets

Halve the Labour of Taking Stock.

Price of Complete Pad, 2/6 post free.

The Chemist & Druggist, 42 Cannon St., London, E.C.4

Publications Dept.



FARLEY'S MIDGET CASH TILLS
(Send for List C.1)

FARLEY'S SHOPFITTERS

New and Second Hand

227 Old Street, London, E.C.2

C. WOOLLONS
M.P.S.

Manor Works, Acton Lane
HARLESDEN - N.W.10
One minute from Jubilee Clock
PHONE: WILLESDEN 4065

PHOTOGRAPHIC DEVELOPING PRINTING AND ENLARGING

SEND FOR LIST.

EXCLUSIVELY A PHARMACY LINE

P.P.T. PY-SHAN POINTS TEA
SECURES YOU REGULAR CUSTOMERS
AND 7d. PER POUND PROFIT.

Write for full particulars to— Thos. Christy & Co., 4/12 Old Swan Lane,
E.C.4

Apology

MEDICAL BUREAU,
90, Cecil Road,
Upton Manor,
London, E. 13

I, Captain Prince, hereby tender my humble apologies to Messrs. Burroughs Wellcome & Co. for employing in my lectures or pamphlet of Instructions the word TABLOIDS, which I am informed by the said Company is a trade mark.

I hereby agree to the publication of this apology by Messrs. Burroughs Wellcome & Co., and I undertake to respect in future all trade marks owned by them.

Dated this 9th day of September, 1926

(Sd.) A. C. PRINCE

Witness: (Sd.) K. S. Prince

The registered Trade Mark

'TABLOID'

is an arbitrarily-coined word or brand which designates specifically "Burroughs Wellcome & Co." products. The substitution of goods of any other manufacture, when the word 'TABLOID' is used in ordering, is an infringement and unlawful.

We prosecute offenders rigorously in the interests of prescribers, dispensers, patients and ourselves

TRADE
MARK

'TABLOID' BRAND QUININE PRODUCTS

Prepared from 'WELLCOME' Brand Quinine, the purity and alkaloidal value of which exceeds the B.P. standard. These fine products realise the ideal of those chemists who pride themselves upon the unimpeachable quality of the drugs they sell and dispense.

For full range of 'Tabloid' Quinine Products,
see B. W. & Co. General Price List, 1926



BURROUGHS WELLCOME & CO.
(THE WELLCOME FOUNDATION LTD.)
LONDON



BAYER PRODUCTS LTD.

—ACTON VALE—
LONDON, ENGLAND

ARE THE PROPRIETORS for the United Kingdom, Australasia, South Africa,
and certain other Colonies of the following (amongst other) trade marks

"LUMINAL"
"SAJODIN"
"PROTARGOL"
"OPTARSON"

"HELMITOL"
"SALOPHEN"
"NOVASUROL"
"THEOCIN"



Make sure that all products sold under the above
brands bear also the BAYER CROSS Trade Mark

*Proceedings will be taken against any
person selling or offering for sale
under any of the said trade marks
pharmaceutical products which are
not issued by Bayer Products Ltd.*

Sole Agents for Australasia: FASSETT & JOHNSON, Ltd.
Sole Agents for the Union of South Africa: LENNON LIMITED, Cape Town and Branches.

Sole Agents for the Irish Free State: MAY, ROBERTS & Co. Ltd., Dublin



When Nature Fails.

Benger's Food was first prepared, over 40 years ago, for the use of medical men, who quickly appreciated that, in Benger's Food, science had been able to step in and give powerful aid when nature failed. Since that time it has always enjoyed the approval and recommendation of the professions of medicine and pharmacy.

Show Material from—

BENGER'S FOOD, LTD., ——— MANCHESTER.

SELLING MORE THAN EVER

ZEPTO ANTISEPTIC TOOTH PENCILS



The display of this attractive Window Show, supplemented by the advertising appearing in the leading Magazines, etc., Compels Sales.

Order Now and Secure Your Share of the Generous Profits

Costs You $5/3$ per Doz.

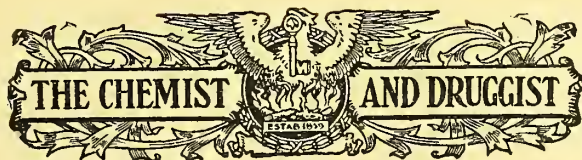
Sells at 9d. each.

41.66% ^{on} Selling Price.
or 71.42% ^{on} Outlay.

ORDERS FOR 6 DOZEN

includes 1 Dozen Bonus (given in consideration of a Window Show) securing you 50% on Selling Price.

THOS. CHRISTY & CO.
4/12 Old Swan Lane, London, E.C.



A WEEKLY JOURNAL OF PHARMACY AND OF THE CHEMICAL AND DRUG TRADES

THE CHEMIST AND DRUGGIST is in circulation and reputation the leading journal addressing the Chemical and Drug trades in the British Empire and other countries in the Old and New Worlds. It is the official organ of the Pharmaceutical Society of Ireland, the Chemists' and Druggists' Society of Ireland, and of other Chemists' Societies in the Overseas Dominions.

SUBSCRIPTION RATE

TWENTY SHILLINGS a year payable in advance to any part of the world, including a copy of *The Chemist and Druggist Diary*. Subscriptions may begin with the first issue of any month. Single Copy, 9d., post free; *Diary*, 10s., post free. Postal orders and cheques should be crossed "Bank of Liverpool and Martins, Ltd."

TERMS FOR ADVERTISING may be obtained on application to

Head Office: 42 CANNON STREET, LONDON, E.C.4

(Telegrams: "Chemicus, Cannon, London." Telephone: Central 3617.)

Branch Offices: { 4 Cannon Street, Manchester. (Tel.: City 52.)
54 Foster's Bldgs., High St., Sheffield. (Tel.: 2458.)
19 Waterloo Street, Glasgow. (Tel.: Central 2329.)
Melbourne and Sydney, Australia.

No. 13	Contents	Series 2433	Vol. 105
	PAGE		PAGE
Business Changes ..	520	PROGRESS OF PHAR-	
Chemists' Exhibition	524	MACY:—	
C. & D. Commercial		Pharmacy	501
Compendium	531	Pharmaceutical	
Coming Events	520	Chemistry	501
Correspondence:—		Bacteriology	504
Letters	530	Botany	504
Deaths	519	Analytical Chem-	
Editorial Articles:—		istry	504
The Trend of		Biological Chem-	
Therapeutics	522	istry	505
Blue Dyes for		Industrial Chem-	
Alkaline Solu-		istry	508
tions	523	Pure Chemistry	
English News	497	and Physics	510
Gazette	525	Dentistry	511
Information Depart-		Essential Oils	511
ment	520	Fixed Oils and	
Insurance Act Dis-		Fats	512
puting	518	Materia Medica	512
Irish News	500	Medicine	513
Marriages	519	Optics	513
New Companies and		Pharmacology	514
Company News ..	500	Photography	517
Observations and Re-		Veterinary Medi-	
flections	521	cine	517
Personalities	519	Trade Notes	520
Retrospect	530	Trade Reports	525
Scottish News	499	Wills	519

"C. & D. Diary," 1927

"Known, Admitted and Approved" Remedies

The publication of *The Chemist and Druggist Diary*, 1927, which will take place in December, affords a unique opportunity of registering formulas for "known, admitted and approved" remedies, which can then be sold by chemists free of medicine-stamp duty, provided the appropriate reference to this standard work is given on the label of the preparation. It is an exceptional opportunity for chemists who require to make revisions rendered necessary by changes in poison law or developments in pharmacy. It is necessary that formulas, either new or modified, with the title under which the article is to be sold, should be submitted **not later than October 18** for inclusion in the *Diary*. In view of the large number of formulas received and of the fact that each year many chemists overlook the date fixed, we desire to point out that part of the *Diary* goes to press a few days after. Consequently we cannot publish any formulas received after the date mentioned. Formulas, which must be written on one side of the paper only, should be addressed to the Editor, *C. & D.*, 42 Cannon Street, London, E.C.4.

English and Welsh News

The Editor will be obliged if subscribers will send him marked copies of newspapers containing items of interest for insertion in this or other news sections.

Ethyl Alcohol Substitutes Committee

An Inter-Departmental Committee has been set up with the following terms of reference:—

To consider and report what duties, restrictions or prohibitions, if any, should be imposed upon substances other than ethyl alcohol which are capable of being used as substitutes for ethyl alcohol by reference to:—

- (a) the maintenance and safety of the spirit revenue;
- (b) the various uses to which they are or may be put;
- (c) the public health;
- (d) the desirability of avoiding any restriction which might unnecessarily hamper trade progress or discourage experiment.

Mr. C. J. T. B. Grylls, a Commissioner of Customs and Excise, is chairman, and the members include representatives of the Government Laboratory, the Board of Trade, and the Ministry of Health.

Contracts

The following tenders have been accepted by the bodies named:—

Chelmsford Guardians.—R. Bailey & Son, Ltd., dressings; Corbyn, Stacey & Co., Ltd., drugs.

Cranbrook Guardians.—Surgical Manufacturing Co., Ltd., appliances.

Faversham Rural Council.—Mr. R. G. Eacott, chemist and druggist, Greenstreet, Sittingbourne, drugs, etc.

Isle of Wight Guardians.—Boots, Ltd., drugs; S. Maw, Son & Sons, Ltd., The "Sanitas" Co., Ltd., Robert Bailey & Son, Ltd., W. G. Taylor (Southall Bros. & Barclay, Ltd.), and B. Pratt & Co., sundries.

Nantwich Guardians.—Mr. William C. Grice, chemist and druggist, drugs.

Romsey Guardians.—Mr. F. Oram; Ph.C., dressings.

Grocers' Exhibition

The thirtieth international exhibition of the Grocery and allied trade was opened at the Agricultural Hall, Islington, London, N., on September 18, the closing date being Friday, September 24. A newcomer among the exhibitors is noted in the Empire Marketing Board and Department of Overseas Trade, which has a stand showing in different sections produce of the following countries: South Africa, India, Irish Free State, East Africa, West Indies, and Gold Coast. Prominent among the raw materials are green Aleppy and Ceylon-Malabar cardamoms, Tellicherry pepper, chillies, etc. The Empire Marketing Board has lately been established to promote the sale of Empire produce, and this is the first exhibit to appear. Fairy Dyes, Ltd., show a model of the works and draw attention to the attractive packing and handsome showcase which, aided by judicious advertising, help to promote steady sales. The "Drummer" and "Jiffy" dyes of William Edge & Sons, Ltd., are also well displayed. Kaputine, Ltd., and P. H. Gallo-way provide practically everything in the drug line that grocers are likely to handle. Newball & Mason, Ltd., make an attractive show of their well-known cordials and wine essences. Rayner & Co., Ltd., show flavouring essences and food colours among a large variety of their products. Glax-Ovo can be sampled on the spot. The latest cash registers are shown at the stand of the National Cash Register Co., Ltd. Price's Patent Candle Co., Ltd., have again a variegated display of all kinds of candles, prominent among which are Pyramid Night Lights, and the Anglo-American Oil Co., Ltd., confine their exhibit almost entirely to candles. Among the other exhibitors are Dudley & Co., Ltd., Mansell, Hunt, Catty & Co., Ltd., William Sessions, Ltd., who specialise in stationery, showcards, waxed paper, etc. The Standard Essence Co., Ltd., who show a large range of flavouring essences.

Inquests

At St. Pancras, London, on September 20, a verdict of "Suicide while of unsound mind" was recorded in the case of Arthur G. Hughes, whose death was due to drinking a carbolic solution.

The administration of camphorated oil in mistake for castor oil resulted in the death of a seventeen-months-old child at Slip End, Luton, recently. An older child had asked for and had been supplied with camphorated oil, which the mother had given the infant without noticing the label. At the inquest a verdict was returned accordingly.

At Carlisle, on September 16, an inquiry was held into the circumstances attending the death of George C. Gorham, described as a chemist's assistant, who died in the railway station waiting room. According to medical evidence, a bottle half full of hydrocyanic acid was found beside deceased, and there was no doubt that Gorham died from taking this poison. A "Suicide" verdict was recorded.

Following the remarks of the coroner at the inquest on a woman who died in the Metropolitan Hospital, London, from lysol poisoning (*C. & D.*, September 18, p. 477), the secretary of the German Hospital has sent a letter to Dr. Edwin Smith, in which he states:—"... Dr. Küp, in answer to a question put by you, appears to have stated, or at any rate led you to suppose, that this hospital was not adequately equipped to deal with emergencies, and you naturally commented adversely upon this. My committee feel that they cannot allow the statement, or suggestion, that this hospital is not fully equipped for any emergency to go uncontradicted. This hospital, on the contrary, is, and always has been, fully equipped for any emergency, including of course cases of poisoning. Stomach pumps, antidotes, and emetics are not only in every consulting room, but also in every ward. . . ."

At West Hartlepool, on September 20, when the inquest on Harriet Turnbull was resumed (*C. & D.*, September 18, p. 477), Mr. J. A. Robinson, chemist and druggist, was represented by Mr. Bailey, a solicitor, who elicited from J. W. Turnbull, son of the deceased, that he did not take a poison bottle to the chemist's for the prescriptions to be made up, but took two ordinary medicine bottles, as it was usual for a chemist to exchange an ordinary bottle for a poison bottle in such circumstances. Mr. Bailey said witness evidently relied on the chemist to do for him what he ought to do for himself, and witness agreed, but he denied that he did so to save a copper or two. Mr. Robinson stated that he remembered making up the belladonna prescription, but he could not remember by whom the bottles were brought to him. The bottle containing the liniment was not a proper bottle. It was always his custom to put liniments likely to cause death into proper poison bottles, and he could not understand how that bottle got away without being noticed. The only explanation he had was that while it was lying flat on the counter it would have a liniment label on its face upward, and he took it for granted it was all right, as some poison bottles were like medicine bottles in general appearance, the only difference being the fluted edges at the back. The jury returned a verdict that death was due to belladonna poisoning self-administered by accident, and that Mr. Robinson was not grossly negligent in supplying the liniment in a bottle which was not a proper poison bottle.

Birmingham

Following a notice of his intention, an inspector under the Dangerous Drugs Acts has recently visited a number of chemists in this area.

Several prosecutions have occurred in the Smethwick district lately in connection with the employment of boys. The cases have been dismissed on the payment of costs, and with a warning.

The large increase in the number of pharmaceutical students at the Municipal Technical School has necessitated the appointment of Mr. E. J. Moore, M.C., B.Sc., as an additional lecturer in botany. Mr. W. B. Grove, M.A., lecturer in botany, hopes to take the same part in the pharmaceutical classes as in former sessions.

The annual reliability trial of the Birmingham and Midland Pharmacists' Motor Club will take place on September 26. Cars will assemble at 10.30 a.m. in Maypole Lane, Alcester Road, and will be sent off at one

minute intervals, commencing at 11 a.m. The entrance fee is 2s. per car and the chief prize is a silver rose bowl.

The members of the May Lane Allotments Association, Ltd., recently held their annual exhibition at the Co-operative Hall, Alcester Lanes End. The show was opened by Miss Alcock, a daughter of Mr. F. H. Alcock, the President of the Association, in a pleasing little ceremony, and a beautiful bouquet was handed to her in appreciation of her services. Among the prizes offered for competition was a cup presented by the President.

To celebrate the opening of the works extensions at Charford Mill, Bromsgrove, Southall Bros. & Barclay, Ltd., gave a dance there on September 11. Two of the directors, Mr. T. Barclay (chairman) and Mrs. Sharp, were present. The new stores, which was prettily decorated for the occasion, has been designed so that there can always be a month's stock on hand, and the new bleach yard will increase the plant to four times its present capabilities. About 350 people took part in the festivities, prior to which Mrs. Sharp was presented with a bouquet. A short speech by Mr. T. Barclay during the interval was responded to with cheers, and on the proposition of Mr. Tomalin, works manager, a hearty vote of thanks was accorded the directors for providing the entertainment.

Liverpool

The thunderstorm on Monday morning was one of the worst experienced in the district for a lengthy period. There were floods in many parts.

At an extraordinary meeting of the tennis section of the Liverpool Pharmacists' Club, Mr. W. J. Tristram presiding, it was decided to sign a contract for the same playing field at Wavertree for next season. The members expressed their appreciation of the catering arrangements made by the ladies.

Manchester

The heat wave that visited Manchester during the week-end was responsible for a decided fillop to the photographic trade.

One of Manchester's leading citizens, Alderman T. Turnbull, who once, at the age of seven, was paid three-pence by a Manchester chemist for service rendered, has stated that this was the turning point in his career, and saved his family from the workhouse during the great cotton famine. He speculated in watercress and onions and made the three-pence into 1s. 6d. He was employed by the chemist later as errand boy.

The syllabus of the Manchester, Salford and District Branch of the Pharmaceutical Society for the winter session has now been issued. In the senior section there are two lantern lectures, the first of which is on October 13, when Mr. W. Wyatt will lecture on the Acts of Parliament relating to stamped medicines. The second is on December 8, by Dr. J. H. Burn, M.A., the director of the biological laboratories of the Pharmaceutical Society, who will give "Some Methods of Biological Assay." On February 9, 1927, Mr. Herbert Skinner, Vice-President of the Pharmaceutical Society, will give an address, and on March 9, a lecture on "The Natural History of the Glass Container" will be given by Professor W. E. S. Turner, D.Sc. (professor of glass technology at the Sheffield University). The last three lectures will be joint meetings with the Manchester Pharmaceutical Association. The junior section have for their opening meeting, on September 27, discussions on "Advertising," by Councillor R. G. Edwards, and "Window Dressing," by Mr. J. Cleworth. The first dance will be on October 6.

Sheffield

Mr. J. T. Appleton is on a visit to some of the capitals of Europe.

The George Noble (of London) competition for the students has resulted as follows:—(1) A. R. Cumming, (2) C. Appley, (3) S. Short.

Mr. John Austen, Ph.C., presided recently at the special musical service in connection with the opening of the new Wesleyan Mission Hall, Attercliffe.

Miscellaneous

WINDOW SMASH.—A window at the premises of Boots, Ltd., Blackburn Road, Accrington, was broken by a vehicle on September 20.

PROPOSED EARLY CLOSING ORDER.—Swindon Town Council has issued a draft order for chemists as follows:—Mondays, Tuesdays and Thursdays, 7 p.m.; Wednesdays, 1 p.m.; Fridays, 8 p.m.; and Saturdays, 8.30 p.m.

PHARMACEUTICAL SOCIETY CIRCULAR.—The Pharmaceutical Society of Great Britain has sent to all chemists on the Register a circular calling attention to the recent amendment of the schedule of poisons, and the changes in the regulations dealing with apprenticeship and the standard of the Preliminary examinations.

COST OF LIVING.—According to the "Ministry of Labour Gazette," on September 1, the average level of retail prices of all the commodities taken into account in the statistics compiled by the Ministry was approximately 72 per cent. above that of July 1914, compared with 70 per cent. on August 1, and 74 per cent. on September 1, 1925.

DANGEROUS DRUGS ACT CASES.—At Berwick, on September 15, Mr. W. P. Watters, chemist and druggist, formerly of Tweedmouth, now residing at Hawick, was fined £15 and costs for failing to enter in his register certain dealings in morphine.—At the Thames Police Court, London, on September 22, four Chinamen were fined sums ranging from £3 to £1 10s. on charges relating to the possession of opium and opium-smoking instruments.

SUPPLYING CAUSTIC POINTS.—A short time ago Burgoyne, Burbidges & Co., Ltd., manufacturing chemists, London, E., obtained a contract from the Lambeth (London) Guardians for the supply of six dozen caustic points. While fixing their contract price for the caustic points an error was made in inserting 4s. 6d. per gross, instead of 4s. 6d. per dozen. The contractors then wrote a letter to the Guardians, pointing out the mistake that had been made, and asked if they might be permitted to charge at the higher rate in respect of the six dozen recently supplied. The matter was put before the Works and Contracts Committee of the Board, which thought the contractors should abide by their mistake. When the letter came before the Board at the last meeting it was recommended that the request of the contractors to charge a higher rate be not acceded to.

LEGISLATION BY REGULATION.—At a meeting convened by the Greater London Council of Grocers' Associations at the Agricultural Hall, London, N., on September 20, Mr. F. W. Beck, solicitor to the Grocers' Federation, speaking on the subject of pending legislation affecting the trade, said he took it as an axiom that no legislation of any kind or on any subject ought to go beyond the necessities of the times and beyond public opinion. If they applied that test to the subjects which were prominently before the trade at the present time—namely, the new prohibitive regulations which were to come into force on January 1 next, the Short Weights and Measures Act and the Merchandise Marks Act—he said, without hesitation, that there never had been any real public demand and there was no real justification for any one of those proposals. He thought the trade had a right to protest strongly against legislation by regulation. Regulations were almost invariably made by committees of Civil servants or retired Civil servants, who were not practically acquainted with the details of the matters they were dealing with. It is an impracticable proposition at the present time for a large proportion of the foodstuffs from overseas to be imported in a fit state for consumption unless some preservative is used.

IN THE COURTS.—At Dover, on September 15, a soldier named Davis was fined £2 10s. for breaking a plate-glass window at the premises of Mr. J. Weir, chemist and druggist, Snargate Street, on the previous evening.—At the Mansion House, London, on September 16, William M. Kneale, Liverpool, was committed for trial on a charge of publishing a defamatory libel concerning Mr. F. d'Arcy Cooper, chairman of the directors of Lever Bros., Ltd., in a letter addressed to the secretary of the company. It was stated that the accused, who had

nothing whatever to do with Lever Bros., conceived the idea that it was a business he was fitted to manage. He applied to be appointed, but his application was not granted. He commented in public and in private on it, and began from that time to vilify those whom he sought to replace.—At Greenwich Police Court, London, on September 17, Mr. W. H. Brooks, of Brooks' Drug Stores, New Cross Road, was summoned for selling lime water containing 18 per cent. excess of water. Mr. H. Glyn Jones, for the defence, said that, having received notice of a warrant and a copy of the invoice, the borough council should have made inquiries, and either summoned Burgoyne, Burbidges & Co., Ltd., the manufacturers, who accepted responsibility, or have withdrawn the summons against defendant. Dr. Thomson, medical officer for Deptford, said there was absolutely no question of dishonesty on the part of defendant's firm, which was of high repute. The summons was dismissed.

Scottish News

Brevities

The Scottish chemists' annual golf competition, which was postponed in May, was held on September 15 at Gleneagles. There was a large entry from all over Scotland and a most enjoyable day was spent. Mr. C. Stephen, of Dundee, accepted the custody of the Gibbs' trophy on behalf of the Central Division, and Mr. D. G. Mackenzie proposed a vote of thanks to Mr. and Mrs. Gibbs. The prizes were presented to the following winners by Mrs. Gibbs:—*Challenge Cup and Medal*, D. W. Foster, Dunblane; *First Class*, D. G. Mackenzie, Glasgow; J. G. Taylor, Kilm, J. Greig, Glasgow; *Pears' Cup*, J. Lowe, Kinross; *Second Class*, J. H. Russell, Saltcoats; M. G. Duncan, Aberdeen; *Queen's Course*, D. H. Russell, Saltcoats; D. W. Foster, Dunblane; K. Mackenzie, Glasgow; *Territorial Cup*, Central Division.

Edinburgh

In the Sheriff Court, on September 9, John Elliot, assistant to Michael Hamawi, 7 West Register Street, was charged with selling a bottle of lysol, a preparation containing more than 3 per cent. of carbolic acid and its homologues. In giving judgment, the Sheriff said the presence of carbolic acid in the preparation had not been proved, nor had it been proved that it was present in such quantity as to make the preparation poisonous or within the Schedule. The carton was labelled "Free from carbolic acid," which, to an unskilled person, would suggest that in selling the preparation they were not selling carbolic acid. Only a skilled person would know the meaning of homologues of carbolic acid. He therefore found the charge not proven. He was rather glad to come to this conclusion because he had considerable doubt about the competency of bringing a charge against two persons relating to the same incident. It might be that a charge could be brought against a master and a servant for the same offence (*see C. & D.*, September 4, p. 418), but he was not aware of any decisions in which two offences were charged on the same incident. He had repelled the objection on the ground of competency, and it was on the facts on which he based judgment in saying the case had not been proven and on the facts there could be no appeal.

Glasgow

An exhibition of the products of the Vinolia Co., Ltd., will be held in the Kenilworth Hotel, Queen Street, from September 27 to October 2.

The report of the chief inspector of the Weights and Measures department shows that a total of 360,131 weights and measures was submitted for verification, and of these 49,155 were rejected as inaccurate. The weighing instruments examined numbered 6,999, and of these 1,013 were rejected for faults in construction or inaccuracy. Contraventions of the Shops Acts in relation to hours of closing increased from 268 in the previous year to 714. It is observed that the inadequacy of the penalties which may be imposed upon offenders under the Shops Acts was again shown to have no deterrent effect.

Irish News

Pharmaceutical Society of Northern Ireland

Nominations closed at noon on September 20 in connection with the first annual election of the Pharmaceutical Council in Northern Ireland. F. T. Smith, J.P., Antrim (druggist), who has since become a pharmaceutical chemist under the new Act, and was therefore not eligible for re-election as a druggist, is also ineligible to stand as a pharmacist, Mr. Smith being still an associate druggist. In the circumstances Mr. W. E. Wilson, the next druggist due to retire from the Council, accordingly took his place, and, together with Mr. Storey, he was re-elected, no other druggist nominations being forthcoming. There will, however, be a contest for the four seats open to pharmacists. All the retiring members were renominated, along with Mr. Hugh Crossin, Donegall Street, Belfast; Thomas Mitchell, Newtownards Road, Belfast, and Henry F. Moore, Royal Avenue, Belfast. Voting papers must be returned before noon on Monday, October 4, and the result will be declared at the annual meeting that night.

Brevities

Mr. T. I. Keogh, Ph.C., has opened a chemist's establishment in Fairview, Dublin.

In the District Court at Macroom, county Cork, recently, Hannah Barrett, who pleaded that she had got a 4-oz. bottle of illicit liquor two years ago as a remedy for rheumatism, was fined £200, mitigated to £20.

At a recent meeting of Tyrone County Council, Mr. Robert Galbraith, Aghnacloy, was granted a licence under the Poisons and Pharmacy Act. The Pharmaceutical Society objected on the grounds that the reasonable requirements of the district were already met.

The Tuberculosis Committee of the Belfast Corporation invite tenders for medicines, dressings, and medical appliances, up to September 30, for the Municipal Sanatorium, Whiteabbey, and the Municipal Hospital for Tubercular Children, Graymount, Shore Road, Belfast, for six months.

Mr. R. H. Kerr, M.P.S.I., who has been manager of Carleton's Medical Hall, Larne, county Antrim, for a long period, has received an appointment in London, and it is understood that the business is about to change ownership. At the September meeting of the Larne Chamber of Trade and Commerce, the chairman expressed regret at the news of Mr. Kerr's departure.

At Letterkenny District Court, on September 16, before Mr. Louis J. Walsh, D.J., a prosecution at the instance of the Pharmaceutical Society of Ireland was brought against Robert Stewart, R.D., the Medical Hall, Letterkenny, for keeping open a shop for the purpose of dispensing medical prescriptions, when possessing no legal authorisation for doing so. The summons was brought in the name of Gertrude Rutland, the Society's inspector. The Justice remarked that what was disclosed in the summons was a serious offence. It was essential, in the interests of the public, that a certain standard should be prescribed with which everyone should comply before being entitled to sell poisons and dispense medicines. Moreover, the profession was entitled to be protected. He considered the case was not one that could be dealt with under the Probation of Offenders Act. For the defendant, Mr. Kelly said he quite agreed with the Justice regarding the injury done to the profession. From the correspondence that passed between his client and the Society, it was clear there was a reasonable spirit existing between them. The Society's solicitors stated that what they really wanted was a deterrent. Mr. Malseed, for the Society, said he must press for a penalty. The view taken by the Society was the view expressed by the Justice, namely, that the public must be protected. Mr. Kelly said he pleaded guilty to the offence. They were all agreed about the necessity for the observance of the law, and especially that qualified people should be protected. He thought, however, in view of the attitude taken up by the Society, that the penalty might be reduced. The Justice imposed a fine of £5 and allowed £1 costs.

New Companies and Company News

P.C. means Private Company and R.O. Registered Office

ABBEYGATE CHEMICAL Co., LTD. (P.C.).—Capital £1,000. Objects: To carry on the business of drysalts, oil and colour men, chemists, etc. R.O.: Abbeygate House, Abbeygate Street, Bath.

RECTORS, LTD. (P.C.).—Capital £1,000. Objects: To carry on the business of manufacturers and vendors of patent, proprietary and other medicines and preparations, soaps, etc. R.O.: 95A Chancery Lane, London, W.C.2.

WYDELLS PRODUCTS, LTD. (P.C.).—Capital £175. Objects: To carry on the business of manufacturers of and dealers in yeast tablets, etc. The directors are: W. H. Wyers and W. Dell. R.O.: 10-12 Ivy Lane, London, E.C.4.

MARSDENS (CHEMISTS), LTD. (P.C.).—Capital £500. Objects: To carry on the business of chemists, druggists, dentists and opticians, etc. The directors are: C. C. Marsden, F. B. Marsden, Mrs. A. Marsden, Mrs. M. Banks, and Mrs. G. Aitken. R.O.: 1 Wortley Road, Armley Road, Leeds.

EMMERTON AND COMPANY, LTD. (P.C.).—Capital £3,000. Objects: To carry on the business of pharmacists, chemists, druggists, herbalists, photographic dealers, opticians, stationers, dealers in fancy goods, perfumers, tobacconists, etc. The directors are: Mrs. Emma C. Keith, R. W. Armitage, and H. S. Foster. R.O.: 27 High Road, Balham, London, S.W.12.

THE BRITISH DRUG HOUSES, LTD., announce usual quarterly dividend of $1\frac{1}{4}$ per cent. on Preference shares, payable September 30.

P. WHIPMAN & Co., LTD.—S. C. Jones, 20 Water Lane, London, E.C.4, ceased to act as receiver or manager on August 24.

UNITED ALKALI Co., LTD.—In view of the continuance of the coal stoppage, the directors have decided to make no interim payment on the ordinary capital of £900,000.

HENRY HODDER & Co., LTD.—The profits for 1926 were £10,941, plus £12,530 brought in. The directors recommend a further dividend of 10 per cent., making 15 per cent., together with bonus of 2 per cent., placing £2,000 to reserve, leaving £13,312 to be carried forward.

GEORGE SPYER & Co., LTD., 29 Ropemaker Street, London, E.C., dealers in chemists' sundries.—Under the liquidation of this company accounts have been lodged showing liabilities £381, against assets valued at £170, and a deficiency of £458 with regard to contributories, the issued capital being £253 in ordinary shares. Mr. G. D. Pepys, official receiver and liquidator, reports that the company was registered in October 1924 with a nominal capital of £500, to carry on business as merchants, traders, importers, and exporters, and, in particular, to acquire a partnership business in chemists' sundries and fancy goods carried on under the style of George Spyer & Co. The failure is attributed to bad trade, owing to depression, and to heavy overhead expenses.

BEECHAM ESTATES AND PILLS, LTD.—The second annual report shows a profit of £271,140 for the year ended June 30, 1926. This was derived from the Covent Garden markets and surrounding properties, from the profits on the pill businesses and from profit on sale of investments, and compares with a total of £301,488 for the first period of 13½ months. After creating a general reserve fund with an allocation of £27,500, and providing for the Preference dividends, the directors propose paying a final dividend of 1s. per share, again making 10 per cent., less tax, carrying the balance of £3,944 to the special reserve, making that fund £27,620. The directors report that satisfactory progress is being made in Australia and Canada, in which colonies factories were established last year. In the immediate future they intend to place upon the market a new preparation of "great remedial value."

The Progress of Pharmacy

AND ALLIED SCIENCES

PHARMACY

Syrupus Scilla Compositus.—L. Gentz ("Svensk Farmaceutisk Tidskrift," Aug. 20, 1926) gives the following formula for compound syrup of squill:—

Liquid extract of squill	...	...	60	grams
Liquid extract of senega	...	...	60	"
Tartar emetic	...	...	1.5	"
Syrup	...	...	878.5	"

Manganese Iodide.—C. Famisier ("Union Pharmaceutique," August, 1926) describes a method of preparing stable, concentrated solution of manganese iodide. A mixture of 15 grams of manganese and 20.5 grams of iodine in water is heated, adopting the same precautions as in the preparation of ferrous iodide, and, after filtration, sufficient water is added to produce 110.5 grams of solution. After adding 136 grams of sugar the mixture is quickly heated to boiling, filtered, and the filtrate made up to 250 grams by the addition of syrup. This amount is sufficient to produce 5,000 c.c. of syrup of manganese iodide.

Syrupus Guarea.—L. Gentz ("Svensk Farmaceutisk Tidskrift," August 20, 1926) gives the following formula for Syrupus Guarea:

Liquid extract of Guarea Rusbyi	...	10	grams
Liquid extract of Euphorbia pilulifera	...	40	"
Compound syrup of squill	...	50	"
Liquid extract of buckthorn, free from bitterness	...	25	"
Diacetylmorphine hydrochloride	...	0.6	gram
Menthol	...	0.15	"
Tincture of cloves (1:4)	...	1	"
Alcohol (90 p.c.)	...	10	grams
Syrup of black currants	...	863.25	"

Potency of Digitalis and Strophanthus Tinctures.—The samples of tincture of digitalis placed on the Canadian market, and obtained from various sources, assayed by F. W. Ward ("Canadian Medical Association Journal," April 1926), varied in strength from 30 to 150 per cent., or from a point 70 per cent. below the standard of the United States Pharmacopoeia, to a point 230 per cent. above the same standard; that is, some samples were ten times as strong as others. This variation was between samples put out by two different manufacturers. But the samples of the same manufacturer vary; one sample has not been found as strong as another sample purchased elsewhere or at a different time. The variation in potency of tinctures of strophanthus ran parallel to that of digitalis. Some samples were 80 per cent. below standard and others 430 per cent. above standard. The variation between manufacturers' preparations was very marked, as was also the variation between samples of the same manufacturer.

Epilating Wax.—W. A. Pusey ("Journal of the American Medical Association," August 28, 1926) states that a wax which is efficient for removing cosmetically objectionable hairs can be made of beeswax, one part by weight, and finely powdered resin, four parts by weight. The wax is melted over a low fire and, after melting is complete, the powdered resin is poured in. The heat is continued and the mass stirred gently until entirely melted; this requires from one to two minutes. For use it then needs to be moulded. One way is to pour it into a deep dish and then crisscross it with deep

markings about three-fourths of an inch apart, as though one were making caramels. The plate must be greased, say, with liquid paraffin, to prevent the wax sticking to it. After it is cooled the wax is fairly brittle and the blocks can be broken off for use. It can also readily be moulded in sticks by taking heavy paper and making a hollow tube about five-eighths of an inch in diameter and 3 inches long, one end of which is closed off by being folded in. After the melted mixture has been poured, the tube is allowed to stand until the mass hardens. This takes only a few minutes. Heavy wax paper is the best for this purpose, but any wrapping paper can be used, provided it is greased on the inside to prevent sticking. Wax, 2 drachms, and resin 1 ounce, make a workable stick; about two or three times as much should be used for making square blocks. The method of removing hairs with the wax is as follows: A block, or the end of the stick, is melted by heating over a flame until it becomes soft; this can be done with a temperature that will not burn the skin. When softened, the melted wax is rubbed on the skin in the direction of the hair growth. It is well to press it down with the moistened end of the thumb, until one gets a layer about one-eighth of an inch thick. This is allowed to cool, or is chilled by the application of ice or cool water. After it is cooled, the edge of the wax is picked up with the nail and the wax pulled off with a quick pull in the opposite direction to the growth of the hairs. This is only slightly uncomfortable. If the application has been well made—and it is easy to learn to do this—few hairs will remain on the surface. Those that do remain had best be left for subsequent application, or removal with epilating forceps. The fragments of wax that stick to the skin can be picked off or easily dissolved with carbon tetrachloride.

PHARMACEUTICAL CHEMISTRY

The Caking of Sodium Phosphate.—H. F. Hildebrandt, R. E. Schoetzw, and P. M. Giesy ("Journal of the American Pharmaceutical Association," Vol. XV, No. 6, p. 432), state that dodecahydrated sodium phosphate ($\text{Na}_2\text{HPO}_4 \cdot 12\text{H}_2\text{O}$) does not possess a true melting point at 40°C . The statement in the U.S.P. (and the B.P.C.—Ed.) that when "heated to about 40°C the salt fuses yielding a colourless liquid," gives the impression that the salt has a definite melting point. Experience does not bear out, the reason being that at 36°C the salt undergoes transformation into a mixture of heptahydrate and dodecahydrate. This accounts for complaints of customers to manufacturers that sodium phosphate has caked, though it has not been subjected to a melting-point temperature. The authors consider that the temperature of 40°C is without significance, and that sodium phosphate will cake if subjected to temperatures over 35°C , the only way to prevent it being to market the heptahydrate which is stable up to 48°C .

Assay of Mercuric Chloride Tablets.—To determine the amount of mercuric chloride in tablets, E. Rupp, K. Müller, and P. Maiss ("Pharmazeutische Zentralhalle," August 19, 1926) recommend the following method on account of its simplicity and accuracy: Dissolve one or two tablets (corresponding to a content of 1 gram of mercuric chloride) in 100 c.c. of water. Add 20 c.c. of this solution to a beaker containing 25 c.c. of $N/10$

The Progress of Pharmacy and Allied Sciences

sodium hydroxide and 15 to 20 drops of perhydrol (or 10 c.c. of 3 per cent. acid-free solution of hydrogen peroxide) and heat the mixture over a small flame until the mercuric oxide assumes a grey colour and the red coloration of the eosin present has disappeared. [Eosin is the dye prescribed in several Continental pharmacopœias for the distinctive coloration of mercuric chloride tablets.—EDITOR.] This requires about three to five minutes at about 50° C. When cool, add 40 to 50 c.c. of water and 2 to 3 drops of methyl red solution and titrate with *N*/10 hydrochloric acid. 1 c.c. of *N*/10 sodium hydroxide corresponds to 0.1357 gram of mercuric chloride.

Cascara Sagrada does not contain a tannin is the opinion of J. C. and B. L. de G. Peacock ("American Journal of Pharmacy," Vol. 98, No. 7, p. 395), this being the outcome of research on the resinous substance obtained from cascara sagrada, which produces a coloration with ferric chloride. This colour factor was found to be (1) non-absorbable by hide powder, (2) dialysable through parchment, and that (3) in saturated water solution it does not precipitate gelatin. The resinous product was obtained by extracting a decoction with several successive portions of ethyl acetate. (The decoction was made by boiling 2.5 kilos. of ground bark for half an hour with three successive portions of water, each consisting of 5 kilos.) A reddish, almost varnish-like, residue was obtained on removing the solvent, from which ether removes at once the greater part of the red colour. The final product obtained was a light brown porous mass, which could be given a puffed and glistening tannin-like appearance by moistening with ether and rapidly evaporating *in vacuo*. It was soluble in alcohol, producing a yellow solution withstanding dilution with water in all proportions. The alcoholic and dilute alcoholic solutions gave the peculiar colour reaction and precipitate with ferric chloride and a deep flesh-coloured precipitate with lead acetate.—J. B. Berardi and M. C. Canan ("Journal of the American Pharmaceutical Association," Vol. XV, No. 3, p. 189) find that there are at least two colour reacting constituents (to ammonia) in cascara sagrada; one, practically insoluble in water, giving a deep cherry-red colour with ammonia, whilst the other, which gives an orange-brown colour with ammonia, is soluble in water. Both constituents are soluble in ether. The water soluble bitter principle accompanies the latter, but acts more slowly with marked griping compared with a therapeutically active non-bitter principle, which is insoluble in water, but gives a cherry-red coloration with ammonia. Four samples yielded 4.89 to 7.10 per cent. of gum-like non-bitter principle and 2.41 to 3.06 per cent. of bitter substance.

Cinchona Assay.—As the outcome of a series of comparative tests of the various methods in use for the determination of the total alkaloids in cinchona, O. Dafert and H. Vlvek ("Pharmazeutische Monatshefte," August 1926) state that reliable results are obtainable even when employing small amounts of the drug, as well of the necessary reagents. To this end they recommend the following modification of Dieterle's method: 0.2 gram of cinchona in fine powder is heated in a boiling water bath for ten minutes with a mixture of 0.2 c.c. of hydrochloric acid (25 per cent.) and 1 c.c. of water. When cool, 3.5 c.c. of chloroform and 0.5 c.c. of solution of sodium hydroxide (15 per cent.) are added, and after shaking the whole for ten minutes 7 c.c. of ether is added. The mixture is again shaken and set aside for one hour, when 0.2 gram of powdered tragacanth is added and the whole vigorously shaken for two minutes. When complete separation has taken place the chloroform-ether layer is removed by decantation and the residue is twice rinsed with two portions of 5 c.c. of a mixture of chloroform 1 and ether 2 parts. The collected chloroform-ether solution is evaporated to about one-third of its volume, and when cool the residue is transferred to a small separator; the beaker is first rinsed with 5 c.c. of ether, then twice with 5 c.c. of *N*/100 hydrochloric acid, and finally thrice with 5 c.c. of water; the washings are added to the contents of the separator.

The latter is shaken for three minutes, and when the two liquid layers have separated, the acid layer is transferred to a small Erlenmeyer flask and the ethereal layer is twice shaken with 5 c.c. of water, which is added to the contents of the flask. The acid solution is now titrated with *N*/100 potassium hydroxide, using methyl red as indicator. The change of colour is more apparent by resorting to iodometric determination, which involves the following modification: 1 c.c. of solution of potassium iodide (10 per cent.) and 0.2 c.c. of solution of potassium iodate (10 per cent.) are added to the acid solution obtained in the final operation described above, and the mixture is set aside for five to ten minutes, whereupon *N*/100 sodium thiosulphate is added until the yellow colour is only just apparent. After adding three drops of starch solution, titration is continued and is completed when the blue coloration does not reappear after a lapse of ten minutes.

Suitability of Chloroform for Alkaloidal Assay.—H. R. Watkins and S. Palkin, in "Industrial and Engineering Chemistry" for August, state that the usual purity tests for chloroform are inadequate as regards determining its suitability for alkaloidal assay. Low and variable results were obtained in assay of nux vomica fluid extract with two brands of reagent chloroform. Consequently alkaloidal extractions were made by several different methods, including cold extraction with hand-shaken separatory funnel and hot continuous extraction. The following are typical results:—

Method of assay	Alkaloids per 10 c.cm. of Fl. Ext. of Nux Vomica	
	Chloroform I	Chloroform II
U.S.P.	0.2293 gm.	0.2380 gm.
U.S.P. modified	0.2284 gm.	0.2370 gm.
Automatic extraction	—	0.2417 gm.

These illustrate the variations obtained with the two different chloroforms, the error being appreciable even with (U.S.P.) cold extraction. The better chloroform No. II, on prolonged extraction with hot solvent, did not show any loss of alkaloid. Other tests show that "reagent" chloroform can be improved by a "treatment" consisting of prolonged refluxing with an alkaloid (preferably brucine), but continuous extraction with benzene gives the highest assay. Consistent variations were exhibited with different chloroforms in assay of fluid extract of belladonna and of quinine alkaloid, but strychnine, brucine and atropine were less susceptible to error due to using "poor" chloroform. The nature of the error introduced by faulty chloroform is apparent when the alkaloid removed by chloroform and titrated is extracted with benzene, the high recovery values indicating that errors were largely due to partial neutralisation of alkaloid during chloroform extraction. In the case of strychnine, this would appear to be the only effect, but with other alkaloids benzene extraction indicated that some destruction had also occurred. Automatic continuous extraction provided a ready and certain means of determining the suitability of chloroform for alkaloidal assays, but the authors consider that, in view of the variable quality of this solvent, the question of a suitable substitute deserves serious consideration. Benzene is recommended in place of chloroform as, when used in continuous extraction apparatus, it gave excellent results in experimental assays with the above galenicals and alkaloids.

Evaluation of Mercury Compounds.—J. B. Peterson ("Journal of the American Medical Association," July 24, 1926) describes a method for the laboratory classification of mercury compounds by measuring their inhibiting effect on yeast-sugar fermentation, compared with the inhibiting value of mercuric chloride. Briefly the method consists in determining the smallest quantity of the compound under examination that will prevent the formation of gas in a yeast-sugar mixture of definite strength during a period of one hour, mercuric chloride being employed as the standard for comparison. The actual test solutions were made by mixing 2 c.c. of a 50 per cent. sucrose solution with the desired amount of the drug and sufficient water to make the volume 8 c.c.

The Progress of Pharmacy and Allied Sciences

Finally, a 2 c.c. portion of 20 per cent. yeast suspension ("Fleischmann's Yeast" being used) was added; the whole was shaken and poured into a test tube 10 cm. long and 1 cm. in diameter. A test tube 15 cm. long and 2 cm. in diameter was slipped over the open end of the smaller tube and the whole quickly inverted. The linear distance from the end of the small tube to the surface of the liquid was carefully measured. After the tube had been kept at exactly 38° C. for one hour, this distance was remeasured. The tests of quantitative importance were those containing the smallest quantity of drug that yielded practically no carbon dioxide. In the course of the investigation it was deemed necessary also to determine approximately the PH value of a duplicate of each solution, as any marked alkalinity should decrease the amount of carbon dioxide that would be given off. This was done by means of the hydrogen electrode, or, when that was impossible, by means of indicators. It was found as an interesting observation that the yeast acted as a buffer and that, although some solutions without the yeast were markedly alkaline, a fairly constant PH was obtained when the yeast was added. Indeed, the PH of each freshly made solution containing yeast fell between 4 and 7.6. The results are given below in tabular form:—

Substance employed	Inhibitory amount, gram	Equivalent to one part in	Efficiency as compared with mercuric chloride as 1	Weight of mercury inhibitory dose, gram	Relative efficiency to mercuric chloride for equivalent of mercury	PH.
Mercuric bromide	0.0004	25,000	1.25	0.000222	1.7	4-5.2
Mercuric chloride ..	0.0005	20,000	1.00	0.000369	1.0	4-5.6
Mercury succinimide	0.00085	11,760	0.58	0.00042	0.88	4-5.2
Mercuric potassium iodide* ..	0.0012	8,333	0.41	0.000306	1.2	4-5.6
Sublimine ..	0.0018	5,555	0.27	0.0007	0.52	5.2-6
Metaphen ..	0.0017	5,882	0.29	0.00101	0.36	4-5.6
Mercuric oxycyanide	0.0076	1,315	0.065	0.0065	0.056	4-5.2
Merxyl ..	0.012	833	0.041	0.0066	0.055	5.2
Mercuric cyanide ..	0.0155	645	0.032	0.0123	0.03	4-5.2
3-nitro 6 cresol sodium salt; intermediate of metaphen	0.016	625	0.031	—	—	6.8
Mercuric benzoate	0.0266	376	0.018	0.0070	0.053	4-5.6
Mercuriochrome	1	0.065	153	0.0071	0.0176	0.021
2	0.06	166	0.0083	0.0163	0.022	5.9
3	0.06	166	0.0083	0.0163	0.022	
4†	0.01	1,000	0.05	0.0027	0.13	
Mercurosal ..	0.09	111	0.005	0.0406	0.0091	6-7.6
Flumerin	1	0.1	100	0.005	0.0346	6.2
2	0.1	100	0.005	—	—	
Afridol ..	Inhibiting power very weak	—	—	—	—	—
Mercuric salicylate ..	Inhibiting power very weak	—	—	—	—	—

* Contains a small excess of potassium iodide.

† Precipitated with acid, filtered, washed, dried and dissolved in dilute sodium hydroxide.

Comparison of Methods of Digitalis Standardisation.—C. L. Wible ("American Journal of Pharmacy," August, p. 396) compares three methods of digitalis assay on nine tinctures made from leaves of *Digitalis purpurea* and six from *D. lutea* leaves. The methods employed were (1) the U.S.P. official frog method, (2) the colorimetric method of Knudson and Dresbach with picric acid, using ouabain as a standard; (3) the Hatcher cat method, in which a 1:20 dilution is injected at body temperature into the femoral vein at

0.5 c.c. per minute until the end point is reached (the standard of comparison being ouabain, the fatal dose of the sample used being 0.1 mgm. per kilogram of cat). In the following table the activity per cent. is calculated on a basis of 100 mgm. per cat-unit for cat and colorimetric methods, and for frogs in accordance with U.S.P. calculation against fatal dose of ouabain determined for each batch of frogs.

Sample of tincture	Cat		Colorimetric		Frog
	Mgm. per cat unit	Activity per cent.	Mgm. per cat unit	Activity per cent.	Activity per cent.
<i>D. purpurea</i>					
I ..	84	119	72	138	96
III ..	100	100	71	139	120
V ..	190	52	107	93	30
VII ..	130	176	64	156	170
IX ..	53	188	33	298	*
XI ..	53	188	38	263	240
XIII ..	72	138	35	283	150
XV ..	84	119	52	192	109
II ..	64	156	*	*	150
<i>D. lutea</i>					
IV ..	82	121	52	192	144
VI ..	89	112	41	243	105
VIII ..	85	117	49	201	100
X ..	60	166	43	229	187
XII ..	92	108	37	270	120
XIV ..	57	175	40	250	150

* Supply exhausted.

Sample VIII, tested biologically after six months, showed no sign of deterioration. The agreement in biological assays is within 25 per cent., this being the limits of biological error. The discrepancy between colorimetric assay and biological procedure is greater than 45 per cent. in half the samples assayed. Colorimetric tests by Dr. Knudson on four of the samples indicated even greater activity (and greater deviation). The biological assay of ten commercial tinctures supposed of uniform strength (65 mgm.=1 cat-unit) showed an activity ranging from 53 mgm. to 100 mgm. per cat-unit.

Examination of Neoarsphenamine and Sulpharsphenamine.—E. Elvove, in Reprint No. 1,018 from the U.S. Public Health Reports (June 12, 1925, p. 1235), describes a new method for differentiating between neoarsphenamine and sulpharsphenamine. The procedure used consists in dissolving 0.1 gm. of sample in 50 c.c. of water and mixing with 50 c.c. of decinormal iodine solution in a 200 c.c. flask. After adding 10 c.c. of sodium hydroxide solution (2N), the mixture is allowed to stand at room temperature for five minutes, when 21 c.c. of normal hydrochloric acid is added and the flask filled to the 200 c.c. mark. The free iodine in 50 c.c. is titrated with decinormal thiosulphate, using starch as an indicator. The remaining 150 c.c. is mixed with 20 c.c. of sodium arsenite (approximately 0.05 M) in the case of neoarsphenamine, or 30 c.c. with sulpharsphenamine. When change in colour indicates completion of the reaction between free iodine and arsenite, the solution is transferred to 400 c.c. beaker. After adding 5 c.c. of normal hydrochloric acid, the contents are heated to boiling, treated with 5 c.c. of 10 per cent. barium chloride solution and the total sulphate determined as barium sulphate. In addition to arsenic, the total sulphur and sulphate are determined as described previously (Public Health Reports, Vol. 39, p. 750), and also the amount of iodine required on direct titration of 0.1 gm. Subtracting the iodine equivalent of the arsphenamine portion (% As \times 5.172), the difference is taken as approximately the iodine equivalent of the uncombined formaldehyde sulphonylate. In sulpharsphenamine the sulphur oxidised to sulphate by iodine is regarded as an approximation of uncombined sodium formaldehyde bisulphite. On subtracting the uncombined formaldehyde sulphonylate in the case of neoarsphenamine and the uncombined formaldehyde bisulphite in the case of sulpharsphenamine from the total (as calculated on the basis of total sulphur and sulphate determinations), the corresponding combined portion is ascertained. Results with neoars-

The Progress of Pharmacy and Allied Sciences

phenamine indicate that there were but little sulpharsphenamine-like impurities in commercial samples, but the organically combined sulphur was not enough in most cases to account for a disubstituted product, and in two samples not even enough for 50 per cent. mono-substitution product. With sulpharsphenamine the products of two makers contained organically combined sulphur corresponding to 100 per cent. disubstituted product, but in two other samples it was sufficient for only 50 per cent. of mono-substitution product. These chemical differences may not correspond to modification in biological properties, but the plan of analysis should permit determination experimentally of this point.

BACTERIOLOGY

Antiseptic Value of Glycerin.—Arthur Compton, D.Sc., M.D., recently conducted an experimental inquiry into the bacteriological basis for the local treatment of puerperal sepsis and allied conditions by the intra-uterine injection of pure glycerin ("Lancet," II, 1926, p. 326). In the course of an interesting report he points out that he has been able to show that glycerin is an ideal antiseptic in the sense of being less fundamentally toxic for leucocytes, as representative tissue cells, than for a typically resistant bacteria like the staphylococcus. A new antiseptic characteristic is indicated—the bacterial indifferent zone of cyto-bacterial activity—present in antiseptics possessing greater toxicity for tissue cells than for bacteria, and absent in antiseptics possessing greater toxicity for bacteria, which affords a criterion for the selection of useful antiseptics and the rejection of those likely to do more harm than good. In a study of the direct action of glycerin on various bacterial types met with in the genito-urinary tract, it is established that pure glycerin is but feebly bactericidal in comparison with its markedly antiseptic character. The time limits of its bactericidal and of its antiseptic responses to a number of bacteria are indicated. The streptococcus is seen to succumb comparatively early to the bactericidal action of glycerin. The new facts brought to light make glycerin one of the most interesting and ideal antiseptics, and indicate for it a sphere of even greater usefulness in the treatment of inflammatory conditions.

Germicidal Power of Cadmium Compounds.—E. A. Cooper and L. T. Robinson, in a preliminary communication ("Chemistry and Industry," Vol. 45, No. 37, p. 321) on bactericidal action of cadmium compounds, state that these exert a marked inhibitory action, the following figures relating to *B. coli communis* on incubation at 37° C. for 480 hours:—

Compound	Inhibitory Concentration
Cadmium sulphate	1 in 75,000
Cadmium chloride	1 in 75,000
Cadmium bromide	1 in 70,000
Cadmium iodide	1 in 85,000
Cadmium potassium iodide	1 in 37,500
Cadmium polyiodide	1 in 65,000
Cadmium mercuric iodide (yellow)	1 in 100,000
Cadmium mercuric iodide (orange)	1 in 175,000
Cadmium nitrate	1 in 30,000
Cadmium acetate	1 in 75,000

Although the cadmium derivatives lose some activity in serum, the results are considered to suggest that a further study of their germicidal power may be of medicinal interest. Only silver and mercury salts are superior to cadmium compounds in germicidal power. Results are also given of organic compounds, which, however, tend to be less active, the most germicidal being cadmium-alanine (1 in 22,500), cadmium-alloxan (1 in 30,000), and cadmium hydroxylamine sulphonate (1 in 75,000). Cadmium was found to increase the inhibitory power of bases as follows, the figures in parenthesis relating to inhibitory concentrations: Ammonia (1 in 1,000), ammonia and cadmium hydroxide (1 in 4,375, or in serum 1 in 3,750), ethylamine (1 in 1,000), ethylamine and cadmium hydroxide (1 in 2,500), ethylenediamine (in broth or serum 1 in 750), ethylenediamine and cadmium hydroxide (in broth 1 in 7,500, in serum 1 in 1,500).

Bacterial Antigens.—Sir Thomas Horder and Dr. H. S. Ferry ("British Medical Journal," July 31, p. 177) describe a new type of antigen based upon washing off 24-hour agar growth of typhoid bacillus with normal saline, agitating by mechanical shaker to form a homogeneous suspension, and clarifying by means of a Sharples' centrifuge. These washings proved to be more highly antigenic than with filtrates. Washings from other bacteria supposed to be of the endotoxic variety (such as colon bacillus, pertussis bacillus, streptococcus, gonococcus, and especially pneumococcus) were also prepared, antigens of extremely high value being obtained. The important point was the fact that washing extracted the antigenic substance and left the toxic principles behind, tests showing that the washings were non-toxic, whilst the washed bacteria were practically as toxic as before. The antigens would, therefore, appear not to be identical with the endotoxins (as has been hitherto taught), but to be entirely different substances, for which the name ectoantigen is proposed, with "immunogens" as a designation for products containing ectoantigen only; in order to distinguish them from other antigens already in use. The immunogens would appear to approach the ideal antigen, being low in protein content, and practically non-toxic, yet the antigenic properties of these washings exceed those of any other antigens tested. Clinical observation confirms the results of laboratory experience that undesirable reactions are absent. The initial dose of the most useful concentration of antigen is 0.5 c.cm. with increments rising to 2 c.cm. and on occasion to 5 c.cm. Promising reports have been forthcoming, more especially in connection with streptococcal, pneumococcal, and gonococcal infections. [The Report of the Medical Research Council for 1924-5, p. 24, mentions that the specific substance from pneumococci is a complex carbohydrate, with the properties of a gum, and that this opens a new chapter in immunology.—Ed.]

BOTANY

A Labile Form of Plant Protein.—On examining under the microscope a portion of the epidermis from the colourless leaf base of *Iris interregna*, O. Loew ("Chemiker-Zeitung," June 12, 1926) observed the presence of a large drop in almost every cell, this drop usually being of the same diameter—27 micromillimetres—as that of the cells. When a portion of the epidermis is placed in water of 48°-50° C., within four to five minutes the formation of numerous small drops in practically every cell takes place; these droplets coalesce to form larger drops when the temperature is raised to 60° C. However, on warming to 63°-65° C., all the drops disappear almost instantaneously, and their place is taken by a coagulum. These drops exhibit the characteristic reactions for proteins. The wide difference between the comparatively large volume of the drops and the very small volume of the coagulate induces the author to assume that the extremely labile protein substances contained in the drops possess the property of binding a very considerable amount of water, which is immediately set free when coagulation occurs.

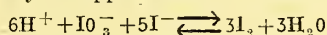
ANALYTICAL CHEMISTRY

Mercury Bromide Paper for Gutzeit Arsenic Assay.—G. Kemmerer and H. H. Schrenk ("Industrial and Engineering Chemistry," Vol. 18, No. 7, p. 707) observed that variations occur in length of colour band as well as uneven colouring or spotting, when using strips of paper sensitised with mercuric bromide in the Gutzeit method of arsenic determination, despite using regular procedure with equal amount of arsenic and observing all known precautions. They find this is due to moisture in filter paper, and recommend that this be dried at 105° C. and stored in a desiccator over calcium chloride. When required it can be cut in 4 mm. strips, sensitised in the usual way by saturating with 1.5 per cent. solution of mercuric bromide in 95 per cent. ethyl alcohol. These are allowed to drain and are then dried in a large

The Progress of Pharmacy and Allied Sciences

desiccator for ten minutes. The treated strips should not be stored longer than two hours before use. A marked improvement in routine work in two laboratories has followed the use of this method during the past year.

Standardisation of Strong Acids.—I. M. Kolthoff, in the "Journal of the American Chemical Society" for June (p. 1447), shows that pure potassium iodate, in the presence of a slight excess of sodium thiosulphate, is a very suitable substance for the standardisation of strong acids by an application of the reaction:



In a neutral solution of potassium iodate containing potassium iodide and sodium thiosulphate, the iodine liberated on the addition of hydrochloric acid is removed continuously by the thiosulphate, and the liquid remains colourless and neutral until all the iodate is used up. A drop of acid in excess produces an acid reaction, and therefore the standardisation of hydrochloric acid with potassium iodate may be carried out just as an ordinary acidimetric titration with the aid of some suitable indicator. In the experiments with decinormal acid 356.6 mgms. of iodate were dissolved in 100 c.c. of water, and to this solution 0.5 gm. of potassium iodide and 3 gm. of sodium thiosulphate were added. For seminormal acid the quantities used were iodate 1.784 gm., iodide 2 gm., and thiosulphate 13 gm. In all cases only a slight excess of thiosulphate was present at the end of the titration, as a large amount makes the colour change less sharp. A suitable indicator is dimethyl-yellow, which gives a colour change with 0.10 to 0.12 c.c. of decinormal acid in 200 c.c. of liquid. The author, however, states that borax is the substance to be recommended most as a standard for acidimetry. It is obtained in a pure state by recrystallisation from water and drying to constant weight in a desiccator of a 60 per cent. relative humidity (over saturated solution of sodium bromide). Borax has the advantages of a large equivalent weight (190.61), and colour changes can be observed very accurately with methyl-red or dimethyl-yellow. Sodium carbonate compares unfavourably with borax, being hygroscopic, and the end point is obscured by carbon dioxide unless this be removed by boiling.

BIOLOGICAL CHEMISTRY

The Vitamins of Papaya.—C. D. Miller, in the "Biochemical Journal" (Vol. xx., No. 5, p. 515), gives data of feeding experiments on guinea-pigs with fresh papaya. He concludes that this cheap fruit, which is consumed largely in the tropics by all classes, is an excellent source of vitamin C, a good source of vitamin A, but only a fair source of vitamin C.

Vitamin Variations in Yeast Extracts.—Madame L. Randoin and R. Lecoq, in a communication to the Paris Academy of Sciences on June 7, state that experiments with pigeons show that an extract from beer yeast contains both types of vitamin B, that maintaining growth and that curing polyneuritis. An extract from distillery yeast was markedly inferior in vitamin content, and only contained the first factor.

Vitamin C inactivated by aeration cannot be regenerated by reduction is the conclusion derived from experiments by C. G. Daubney and S. S. Zilva ("Biochemical Journal," Vol. xx., No. 3, p. 519). Hydrogenation with platinum black as catalyst and electrolytic reduction failed to regenerate the antiscorbutic activity of aerated decitrated lemon juice, and though the investigation has by no means exhausted all reducing methods, it is considered that further efforts would not be profitable.

Cryptotoxins is the name applied by H. Vincent in a paper to the Paris Academy of Sciences on May 31 to modified toxins. Sodium palmitate neutralises *in vitro* the toxic effect of tetanus toxin without influencing its immunising properties. Tests on guinea pigs show that 600 times the fatal dose of toxin can be given when sodium palmitate is mixed with it previous to injection. The toxins of diphtheria, dysentery, typhoid and B. *aede-*

matiens are similarly detoxicated. The toxin can be regenerated by adding acid and filtering free from palmitic acid.

Vitamin Content of Milk.—H. Chick and M. H. Roscoe ("Biochemical Journal," Vol. XX, No. 3, p. 632), in continuation of the experiments of Dr. Luce, find that the vitamin A content of milk is dependent upon the diet of the cow, being a maximum when the cow is fed upon fresh green food, and least with winter feed of cereals and roots. Exposure to sunlight has no influence upon the vitamin A value of milk. On the other hand, its antirachitic value depended principally upon insolation of the cow, though diet also appeared to be a contributory factor also, as "pasture-fed" milk possessed the maximum antirachitic value.

Calcium in Body Fluids.—The evidence produced by J. Marrack and G. Thacker ("Biochemical Journal," Vol. XX, No. 3, p. 580) as regards the state of calcium in body fluids is likely to alter present ideas of the causes of convulsive states. As a result of dialysis experiments they conclude that calcium forms an un-ionised compound with proteins (this accounting for the "indiffusible" calcium of serum). The calcium of body fluids is thus only partly in the form of calcium ion, and it is added that Ca⁺⁺ concentration is not regulated by the solubility of calcium carbonate and calcium phosphate. It is considered that epilepsy cannot be caused by a reduction of calcium in concentration, and this results in the rejection of the most plausible theory of the cause of epilepsy.

Fatty Alcohols from Liver Oils.—G. Weidemann ("Bio-chemical Journal," Vol. XX, No. 4, p. 695) has isolated butyl alcohol, C₁₁H₃₇(OH)₂(OCH₃) and selachyl alcohol (C₂₆H₄₆O₃) from the unsaponifiable fraction of the liver oil of the Greenland shark, *Somniosus microcephalus*. This oil contains 10 to 15 per cent. of unsaponifiable matter compared with 0.5 per cent. in cod-liver oil. The alcohols were isolated by conversion into phthalic ester acids. The preliminary experiments suggest that the fatty alcohols of cod-liver oil are presumably dihydric also and exhibit a close resemblance to selachyl alcohol, but are more unsaturated. In a pure condition butyl alcohol and selachyl alcohol are free from growth promoting and antirachitic properties, and do not give any colour reaction with sulphuric acid.

Effect of Heat on Milk.—H. E. Magee and D. Harvey ("Biochemical Journal," Vol. XX, No. 4, p. 872) have investigated the physico-chemical changes induced as a result of heating milk. They find that losses occur in soluble calcium after heating, and that heating progressively lessens the stability of the colloids and increases the size of the protein particles. No differences were observed in the rates of tryptic digestion of milk before or after heating. Pigs fed with diets of milk and cereals showed a lower retention of calcium, phosphorus and nitrogen with heated milk than in the case of fresh milk or sour milk. Addition of soluble calcium to ration of heated milk increased calcium retention by more than the amount added. The experiments suggest that heat has a detrimental effect on the nutritive value of milk, and that one of the most important contributing factors is the reduction in the amount of soluble calcium.

Colour Test for Vitamin A.—S. G. Willmott and T. Moore ("Biochemical Journal," Vol. XX, No. 4) describe an improved modification of Fearon's test for vitamin A. In this resorcinol dissolved in ether replaces pyrogallol crystals. The test should be carried out with resorcinol present equivalent to 0.5 per cent. of the oil taken. The oil is dropped into dry test tubes, the appropriate quantity of resorcinol in ether added, followed (with thorough vertical shaking) by 5 c.c. of 10 per cent. trichloroacetic acid in toluene and 0.5 c.c. of saturated solution of benzoyl peroxide in toluene. The colours after two hours are compared against a solution of magenta toned with methylene blue. Positive results were obtained with the test on all cod-liver oils, beef suet, butter fat, and egg-yolk fat. A specimen of Newfoundland cod-liver oil gave a coloration about forty

The Progress of Pharmacy and Allied Sciences

times as dense as that produced with butter fat. Tests on olive oil, linseed oil, palm-kernel oil, and "ostelin" (rich in vitamin D) were negative.

Proteins of Wheat Bran.—J. C. Murphy and D. B. Jones have carried a stage further the extensive investigations of the U.S. Bureau of Chemistry on the nutritive value of wheat proteins ("Journal of Biological Chemistry," Vol. 69, No. 1, p. 85). Rats grew at an excellent rate for fifteen or sixteen weeks when fed on rations in which unwashed commercial bran was the only source of protein, whereas with patent wheat flour as protein supply the gain in weight was only one-third or one-half. Bran proteins are characterised by a high content of so-called nutritionally essential amino-acids, the quantity of arginine and lysine in the globulin exceeding that of most vegetable proteins, whilst its albumin also contains high percentages of tryptophane, tyrosine, and cystine. In this connection the fact that on bran diet the rats, after the first sixteen weeks, were only able to maintain body weight is significant, and though they produced offspring, there was little success in rearing them and, moreover, fecundity was low. The bran was obtained from hard spring wheat, and did not contain any detectable quantity of wheat embryo (which would exclude vitamin E).

Action of Light on Cod-liver Oil.—P. R. Peacock ("Lancet," II, 1926, p. 328), who has made extensive investigation into the action of light on cod-liver oil, reports that exposure of normal cod-liver oil to any source of white light of sufficient intensity results in the following changes: The normal bright golden fluorescence of the oil progressively disappears, this effect being termed "delumination." Before full "delumination" occurs the oil fails to give the arsenic chloride test for vitamin A. Fully "deluminated" oil, when kept for some months in the dark, slowly regains much of its fluorescence, but the vitamin A appears to be permanently destroyed. There is a change in the absorption spectrum corresponding with change in the fluorescence of the oil. As "delumination" proceeds, so the transmission spectrum extends into the ultra-violet region; as fluorescence returns there is a proportionate return of the absorption spectrum. This paper is intended to emphasise the fact that light is a variable factor which must be taken into account in all quantitative experiments concerning the growth-promoting properties of cod-liver oil and the manner in which such oil is stored; secondly, to call attention to the unusual nature of the complex reaction of cod-liver oil to light, a reaction which is only partly reversible.

Irradiated Orange Juice.—H. L. Maslow, D. H. Shelling, and B. Kramer ("Bulletin of the Johns Hopkins Hospital," July 1926) report the results of preliminary experiments which indicate that antirachitic properties can be imparted to orange juice by exposure to the rays of a mercury vapour quartz lamp. Rachitic rats fed on orange juice thus irradiated commenced to show healing as soon as five days after commencing the treatment; the process was practically complete at the end of about a fortnight. The inorganic phosphorus in the blood serum was found to be raised. The authors are investigating the antirachitic value of irradiated orange juice in the treatment of children suffering from rickets, and the effect of irradiation on the antiscorbutic properties of various specimens of orange juice which differed in their degree of acidity. They are also studying the length of time during which such irradiated orange juice is able to retain its value in the treatment of rachitic animals. Comparing their results with the work of Howland and Kramer and de Bosanyi, they suggest that there may be two types of healing in rickets. In the first healing spreads from the ends of the epiphyseal cartilage into the metaphysis and is associated usually with a raised serum phosphorus content; in the second the healing begins in the middle of the metaphysis and the serum phosphorus is relatively low.

Casein.—C. Rimington and H. D. Kay ("Biochemical Journal," Vol. XX, No. 4, p. 777) have made experiments with a view to eliciting information as to the mode

of combination of phosphorus in caseinogen and the *raison d'être* of phosphoprotein in animal nutrition, since it would appear any advantage from organic phosphorus is connected with maintenance of phosphorus in an unionised condition. In their experiments it was found that though phosphorus is easily removed from the caseinogen molecule by digestive enzymes, the further hydrolysis to inorganic phosphate does not proceed quite so easily as might have been anticipated. Trypsin was found to hydrolyse caseinogen completely giving an intermediate stage of phosphopeptone, but the process is slow. This enzyme separates inorganic phosphorus from phosphopeptone much more rapidly than with caseinogen. Neither kidney nor bone phosphatase have any appreciable action in liberating phosphoric acid from casein, which suggests that the linkages in casein cannot be those of hexosemono- or hexosediphosphoric acids, α - and β -glycerophosphates, or yeast nucleic acid compounds, which all readily lose phosphorus by the action of phosphatase preparations. The phosphorus group in casein must therefore be modified in some way or shielded from enzyme attack. Both pepsin and trypsin remove phosphorus still in organic combination from casein, but the substances are quite different, showing that the casein is attacked in two completely different ways by the two proteolytic enzymes. The relative difficulty with which the organic phosphorus of casein is converted into inorganic phosphate by alimentary enzymes and the ready diffusibility of some of the intermediate phosphoproteins supports the possibility of uptake of organic phosphorus by the young animal.

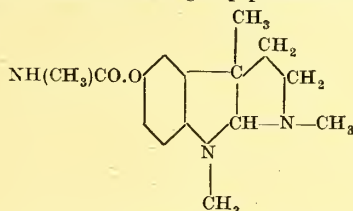
Irradiated Sterols.—O. Rosenheim and T. A. Webster ("Biochemical Journal," Vol. xx., No. 3, p. 537) find that cholesterol can be rendered anti-rachitic by exposure to sunlight as well as to other sources of ultra-violet light. The stability of the "activated" cholesterol is considerably increased by irradiation in the absence of oxygen. A period of one hour's irradiation with a quartz mercury vapour lamp (Cooper-Hewitt, 210 volts and 3.5 amperes) at a distance of 40 cm. has been adopted for routine purposes, though a shorter time may be sufficient. The solid cholesterol is spread in thin film inside a quartz flask of 400 c.c. capacity by dissolving not more than 1 gram in a little anhydrous ether free from peroxides. The solution is transferred to the flask, which is kept rotating horizontally while the ether is removed by a current of air drawn gently through the flask, which is then filled with nitrogen, with evacuation and refilling several times to remove air. Only three groups of "protoplasmic" sterols could be activated, viz.: Cholesterol (a zoo-sterol); sitosterol (a phyto-sterol); and ergosterol (a myco-sterol). Both the secondary alcohol group and the unsaturated carbon linkage contained in the sterol molecule must be intact for successful activation. Coprosterol and amyrol, members of the group of excretory sterols, cannot be activated. An amorphous substance which prevents rickets in rats in doses of $\frac{1}{100}$ mgm. per day has been separated from "activated" cholesterol by precipitating the cholesterol with digitonin. In a note dated June 1 the authors confirm the statement of Shears ("Proc. Soc. Exp. Biol. Med.," 1926, 23, p. 546) that irradiated cholesterol gives a colour reaction with aniline, but suggest that this is due to formation of organic peroxides, and is not, as suggested by Shears, characteristic of vitamin D. Thus cholesterol exposed to sunlight for six months, although inactive in animal test for rachitic properties, gives an intense aniline reaction.

Sources of Vitamin A and B in Nature.—M. T. Burrows and L. H. Jorstad ("American Journal of Physiology," June 1926) report that they have found that cultures of bacteria in their periods of most active growth supply large quantities of vitamin B, but no vitamin A, and that this vitamin B is probably only the normal growth stimulus of any cell in nature. Vitamin A is supplied by these same cultures of bacteria after they have overgrown the medium and have been destroyed by this overgrowth. This vitamin is needed by the functioning organism to replace a certain soap-like substance or substances lost to the cell during its

The Progress of Pharmacy and Allied Sciences

differentiation and function. Its source is the protoplasm of other cells in nature. Vitamin A is essential for the organism in that it is one of the essential substances used in the building of intercellular substances of the body (the connective tissue fibrils, bone, etc.) in the storage of fat and in the function of tissue cells. The authors express the view that body cells can grow only when acted on by a certain concentration of a substance or substances formed by them or by other cells. This substance has been called the archusia (S). The archusia (S) is necessary not only for growth but all activities of the cell. In concentrations lower than that necessary for growth it induces differentiation and function. In the normal developing organism it does not exist in quantities sufficient for the early growth and later differentiation and function. This growth is dependent on a supply of it from other sources. This substance formed by body cells is not specific. Body cells can be made to grow by the archusia formed by bacteria and other plant and animal cells. Extracts of tissues and bacteria containing various quantities of archusia (S) as tested on tissue cells act in the same proportions as vitamin B substitute in the diet of animals. Vitamin B is probably only the normal energy for life (the archusia [S]) formed by all cells in nature. It is the stimulus necessary for the normal growth, differentiation and function of the body.

Miotic Activity in Relation to Chemical Constitution has been studied by E. Stedman ("Bio-chemical Journal," Vol. XX, No. 4, p. 719), who finds that the pharmacological action of physostigmine (eserine) is mainly due to the urethane group present in its molecule:



Physostigmine.

A number of urethanes were prepared and tested for miotic activity:

	Miotic activity
<i>p</i> -NH(CH ₃).CO.O.C ₆ H ₄ N(CH ₃) ₂ HCl	+
<i>p</i> -NH(CH ₃).CO.O.C ₆ H ₄ N(CH ₃) ₂ I	+
<i>p</i> -NH(C ₆ H ₅).CO.O.C ₆ H ₄ N(CH ₃) ₂ HCl	-
<i>p</i> -NH(C ₆ H ₅).CO.O.C ₆ H ₄ N(CH ₃) ₂ I	-
<i>m</i> -NH ₂ .CO.O.C ₆ H ₄ N(CH ₃) ₂ HCl	+
<i>m</i> -NH(CH ₃).CO.O.C ₆ H ₄ N(CH ₃) ₂ HCl	+
<i>m</i> -NH(CH ₃).CO.O.C ₆ H ₄ N(CH ₃) ₂ I	+
<i>m</i> -NH(C ₆ H ₅).CO.O.C ₆ H ₄ N(CH ₃) ₂ HCl	-
<i>m</i> -NH(C ₆ H ₅).CO.O.C ₆ H ₄ N(CH ₃) ₂ I	+
<i>m</i> -NH(C ₆ H ₅).CO.O.C ₆ H ₄ N(CH ₃) ₂ I	-
<i>o</i> -NH(CH ₃).CO.O.C ₆ H ₄ N(CH ₃) ₂ HCl	+
<i>o</i> -NH(CH ₃).CO.O.C ₆ H ₄ N(CH ₃) ₂ I	-
<i>o</i> -NH(C ₆ H ₅).CO.O.C ₆ H ₄ N(CH ₃) ₂ HCl	+
<i>o</i> -NH(C ₆ H ₅).CO.O.C ₆ H ₄ N(CH ₃) ₂ I	-
<i>p</i> -NH(CH ₃).CO.O.C ₆ H ₄ CH ₂ CH ₂ N(CH ₃) ₂ HCl	+
<i>p</i> -NH(C ₆ H ₅).CO.O.C ₆ H ₄ CH ₂ CH ₂ N(CH ₃) ₂ HCl	-

The discussion is confined to the bearing of the results upon the problem of the relationship between chemical constitution and physiological action, consideration of the possibility of employment of synthetic urethanes in therapeutics being reserved. The synthetic compounds have been examined pharmacologically only with respect to one particular property: their action on the iris. While it is probable that the urethanes with miotic activity will exhibit a selective action on the parasympathetic nervous system similar to that of physostigmine, experimental proof thereof is at present lacking. All the active urethanes are substituted phenyl esters of methylcarbamic acid. It is evident that the aromatic urethane grouping confers miotic properties upon these compounds, but whether the basic group is essential for activity is not known. The substitution of ethyl or hydrogen for the methyl radicle in the grouping NH.R.CO.O—

diminishes the activity of the compounds, the *p* and *m* dimethylaminophenyl esters of ethyl carbamic acid being inactive. The conversion of the tertiary basic group N(CH₃)₂ into a quaternary ammonium group N(CH₃)₃I produces a remarkable change in the activities of the urethanes, the activity of the *m* isomeride being unmistakably increased, while that of the *o* and *p* compounds is apparently abolished. The author suggests that chemical factors, as distinguished from physical properties, are at least partly responsible for the activity of the compounds, those derived from phenols which on polarity theory should be most acidic being least active. It appears reasonable to assume that their physiological properties are dependent upon and vary in some way upon the rate at which the urethanes are hydrolysed.

Purified Diphtheria Toxoid.—A. F. Watson and E. Langstaff, of the Wellcome Physiological Research Laboratories, describe in the "Biochemical Journal" (Vol. XX, No. 24, p. 763) the preparation and properties of purified diphtheria toxoid. One of the chief difficulties in employing the Schick test or the Dick test (for susceptibility to diphtheria or scarlet fever respectively) is the presence of a substance causing a "pseudo" reaction which may cause a rise in temperature. This and other non-specific reactions may preclude the injection without injury of the increasingly large doses of toxin necessary for production of antitoxin, so that the purification of antigens should do much to eliminate these non-specific reactions. The communication surveys briefly the methods of purification of culture filtrates containing toxins which have by treatment with formalin been partially or completely converted into toxoids, the Ramon flocculation test being used for assaying strength of fractions, the "Langstaff dose" being that amount of toxin which is equivalent to one unit of antitoxin by this test. *Purified toxin* is the term used to denote the active fractions obtained from culture filtrates of diphtheria bacillus by precipitation at low temperature with 1 per cent. of glacial acetic acid; the precipitate being quickly separated and dissolved in cooled dilute caustic soda to pH 8.0. *Purified toxoid* is obtained by acetic acid precipitation of culture filtrates of *C. Diphtheriae*, which have been treated with formalin, the active fraction precipitated at 35° C. (or under), with separation and solution in caustic soda to pH 8.0 as above. Ultra purified toxin or toxoids denote toxins or toxoid which have been purified by precipitation with acetic acid or alcohol, or by dialysis with water. Preparation of precipitates consisted of adding 1 per cent. glacial acetic acid to the culture filtrates placed in double Winchester quart bottles (four litres per bottle). After allowing the precipitate to settle out and then removed by centrifuging in glass pots, or by Sharple centrifuge with bowl lined by sheet of celluloid. After preliminary centrifugation the supernatant solution is carefully siphoned off and replaced by an equal quantity of 0.7 per cent. saline or sodium acetate-acetic acid mixture adjusted to pH of acid precipitation point (*circa* pH 3.8) to avoid losses which occur in washing if above or below this critical hydrogen ion concentration. One washing is usually sufficient, but one or two more washings will effect a more complete removal of pigment. The Sharple's centrifuge offers many advantages in large-scale operations, but has the drawback that the washing is not so satisfactory as in a large centrifuge having glass pots. A typical concentration from precipitates of forty-eight litres of toxoid (containing 8.5 Langstaff units per c.c.), dissolved in 1,500, 750, 375, and 187.5 c.c. respectively, gave purified toxoids with strengths of 20, 46, 104, and 180 Langstaff units per c.c. The precipitates may apparently be dissolved to give any required concentration in Langstaff units, the volume of solution being only limited by the solubility of the material. The greater the strength of the solution the more rapid is the flocculation of antitoxin (105, 90, 8, and 3 mms. respectively, at 45° C. with above strengths). The strongest sample flocculated in a few minutes in equal volume of serum containing 200 units of antitoxin per c.c. The total solids of the most potent filtered purified toxoid was 0.078 mgm. per Langstaff unit, but the active prin-

The Progress of Pharmacy and Allied Sciences

ciple is adsorbed to some extent in candle filtration. The purified toxoid withstood freezing for three or twenty hours when unpreserved, or when preserved with 0.5 per cent. hydrogen peroxide, but when preserved with 0.5 per cent. phenol the prolonged freezing reduced its flocculating value by 75 per cent., which agrees with the deleterious effect of phenol found by other workers. On heating there are indications of only a slight destruction of toxoid before a temperature of 100° C. is reached, when complete destruction quickly occurs. At hydrogen ion concentration above the precipitation zone the flocculating value remained the same up to pH 10.0, though the time of flocculation increased considerably, this being a remarkably good result compared with existing views in regard to instability to acid and alkalis of unpurified toxin preserved with phenol. Purified toxoid is thus like diphtheria toxoid, a very stable substance. The active fraction can be further purified until the solutions are more than one hundred times less impure than the original toxoid. The purified solutions are protein in nature, and contain sulphur and occasionally phosphorus.

Ethylene Glycol is a unique solvent for physiological purposes state I. H. Page and P. Coryllos ("Journal of Pharmacology and Experimental Therapeutics," Vol. XXVII, No. 3, p. 191). Though physiologically inactive, it possesses organo and aqueous miscibility and wetting power. These investigators were preparing solutions of amytal (iso-amyl ethyl barbituric acid), which is practically insoluble by dissolving with the aid of sodium hydroxide. They find that all the barbital series of hypnotics are directly soluble in ethylene glycol to give stable solutions. Small doses of amytal (by injection) at intervals were found to be well adapted for maintaining anaesthesia in animals. It is added that the interesting problem arises whether or not it is essential to prepare the sodium salt for injection. It is hoped to report further on the interesting properties of ethylene glycol as a solvent.

Experiments on Lamarckian Heredity.—W. McDougall, at the meeting of the British Association on August 10, described experiments with rats which support the hypothesis of Lamarck that species can evolve through the efforts of individual parents to adapt themselves to environmental conditions. Scientists hitherto have discounted the possibility of acquired characteristics affecting the germ plasm and being transmitted as an inherited character. The experiments, which had extended during six years to 17 generations of rats, consisted in training one set to avoid a particular channel when showing a light, as then the electric current passing was sufficient to give the rat using this passage an uncomfortable "shock." After eight generations the trained rats showed a marked preference to avoiding the lighted avenue, whereas the untrained section displayed no such preference. To make the test more conclusive the dangerous avenue was alternated when rats from trained stock showed a marked preference for the safe exit on the twelfth day, whereas it took twenty days before the untrained animals began to avoid the unsafe outlet. Positive results such as the above could not be explained by any other theory than that of Lamarck.

INDUSTRIAL CHEMISTRY

Monel Metal Containers are not suitable for storing flavouring extracts of vanilla is the verdict of T. E. Hollingshead and T. J. Otterbacher ("Industrial and Engineering Chemistry," Vol. 18, No. 8, p. 871). Vanillin, coumarin, and the resins of vanilla react with monel metal, and both odour and flavour of the extract is decidedly weaker by the end of ten weeks.

Trimethylene Glycol, produced by bacterial fermentation of glycerin, is present normally in crude glycerin, states A. Rayner ("Chemistry and Industry," July 30, p. 265r). This is considerably less viscous than glycerol, though it is quite as hygroscopic. It boils at 210° to 211° C., and large quantities of comparatively pure product could be obtained from sweet water glycerin by a simple fractional distillation in an ordinary glycerin

still. It is added that, in view of its similarity in properties to glycerin, that it may replace this where its use depends only upon moisture-absorbing properties or in prevention of freezing of water.

Odorous Principle of Musk.—H. Walbaum ("Journal pour Chemie," I, 13, 166, 1926) discusses the odour-bearing substance of natural musk, upon which he did important work in 1906. He points out that the ketone muskone, in contrast to the allied ketone of civet, zibetone, contains a ring without an ethylene linkage, and is therefore very stable towards oxidising agents such as potassium permanganate. It may be that one is here dealing with a methyl-pentadecanone. The corresponding alcohol muskol yields a phenyl-urethane, and can be easily obtained by reduction of muskone. Details for the preparation of the oxime of the ketone are given, and Walbaum states that the oil from musk contains valerianic acid.

Sodium Napthenate is coming into use as an emulsifying agent. This is a hygroscopic product made from waste alkaline liquids in the purification of lubricating oils distilled from crude petroleum. On treating these liquors with sodium chloride a mixture of naphthenic acids and alkali naphthenates separates out, and after removal this is saponified with strong caustic soda. U.S. Patent 1,582,257 of Frizell and Stagner described a method of mixing dried sodium naphthenate with one quarter of its volume of cresol and dissolving this in kerosene. The product gives stable emulsions with water for use as sprays or in sheep dips. Lubricants of high viscosity can also be made with alkali or metallic naphthenates dissolved in mineral oil. Y. Kawakami ("Jour. Soc. Chem. Ind. of Japan," Vol. 29, p. 64) states that the detergent action and lathering power of sodium naphthenate is slightly inferior to that of ordinary soap, but its gelation capacity is extraordinarily large. The naphthenic acid used boiled at 195° to 200° C. (at 10 mm. pressure) and had a mean molecular weight of 246.5.

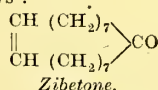
Tertiary Alcohols.—H. S. Davis and W. J. Murray ("Industrial and Engineering Chemistry," August, p. 844) deal with the aliphatic tertiary alcohols and their industrial possibilities. The advantages cited include low boiling point, peculiar solvent properties and resistance to oxidation. Tertiary butanol ((CH₃)₃C.OH) boils at 82.5° C., compared with ethyl alcohol 78.3° C. and isopropyl alcohol 82.2°, and their densities are almost identical. The tertiary alcohols offer unique means of purifying hydroxy acids, such as citric acid, by recrystallisation from hot solution. The tertiary alcohol radicle is one of the most labile groups in organic compounds, and the tertiary alcohols and their halides offer great possibilities in organic syntheses for introducing into compounds hydrocarbon radicles with branched chains. Ease of dehydration, resistance to oxidation and stability to halogens are other important properties. The stability of tertiary butyl hypochlorite should be of industrial importance, as this can be distilled without change.

Wool and its Hygroscopic Characteristics.—The results of a research on "The Hygroscopic Relations of Colloidal Fibres, with Special Reference to their Industrial Importance," was communicated to the Mathematical and Physical Sections of the British Association, on August 10, by S. G. Barker, H. R. Hirst and A. T. King. This showed that wool could absorb 33 per cent. of water, and had a higher capacity for retaining moisture than any other textile fibre. Thus in an atmosphere 95 per cent. saturated with moisture, wool retained 25 per cent., silk 21.5, and cotton 18 per cent. of water. Consequently the wearer of wool clothing would perspire more freely before his clothing felt damp than with cotton, and was less liable to discomfort or catching cold. Wool was perfectly elastic, and when wet returned to its original length even after straining almost to the breaking point of the fibre. This accounted for the suit of clothes coming out refreshed after a rest, whilst the loss of crease in trousers was due to fibres resuming their old form. The heat-retaining power of wool was due to its air spaces, and

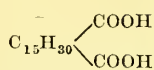
The Progress of Pharmacy and Allied Sciences

it was almost a perfect heat insulator over a wide range of conditions, though its conductivity increased with moisture content. The fading of dyed fabrics required moisture and air (oxygen) as well as light, and a combination of high humidity and sunlight fades fabrics which ordinarily are "fast to light."

Odorous Principle of Civet.—Ruzicka ("Helvetica Chimica Acta," 9, 1926, 230) has improved on the original method for the isolation of the ketone zibetone, from civet, which was described by Sack ("Chem. Zeitung," 39, 538). The crude civet is first saponified by alcoholic potash, and the resulting product is fractionally distilled in a high vacuum. The appropriate fraction is purified by means of semi-carbazone and a yield of from 2.5 to 3.5 per cent. of the ketone is obtained. This is liberated in the usual manner from its semi-carbazide. Dihydrozibetone, $C_{17}H_{32}O$, was prepared by the hydrogenation method of Paal and Skita, thus proving that the ketone possesses a double linkage. The odour of this reduction product is practically identical with that of the original ketone. By oxidation with chromic acid in acetic acid solution a dicarboxylic acid was obtained which was identified as a penta-decane-1.15-dicarboxylic acid, identical with that prepared by Chuit ("Helv. Chim. Acta," 9, 264), which establishes its symmetrical constitution as follows:—



Zibetone.



Penta-decane-dicarboxylic acid.

This is further confirmed by means of oxidation with permanganate of potassium, by which azelaic and lignic acids are obtained. The intimate relationship between the constitution of zibetone and oleic acid gives some idea of the building up of the ketone from fat in the animal organism.

The Classification of Odours.—J. Glassford, in the "Journal of the American Pharmaceutical Association" for June (p. 469), describes the following classification of odours by Zwaardemaker as elaborate and unnecessarily complicated, and in places illogical:—

1. Ethereal or fruity.
2. Aromatic: (a) camphoraceous; (b) spicy; (c) anise-lavender; (d) lemon-rose; (e) amygdaline.
3. Fragrant or balsamic: (a) floral; (b) lily; (c) balsamic.
4. Ambrosial (milk and amber).
5. Alliaceous: (a) alliaceous; (b) cacodyl-fish; (c) bromine.
6. Empyreumatic or burnt.
7. Hircine or cheesy.
8. Repulsive, as acanthus and many narcotic products.
9. Nauseating or foetid, such as products of putrefaction.

The following modification is suggested to include essential oils and synthetic perfumes:—

1. Ethereal or fruity oils (such as amyacetate, ethylbutyrate, etc.).
2. Aromatic oils (cloves, cinnamon, pimento, etc.).
3. Camphoraceous oils (camphor oil, eucalyptus, rosemary, peppermint, etc.).
4. Light flowery oils (jasmine, rose, bay, etc.).
5. Heavy flowery oils (lily, tuberose, narcissi, etc.).
6. Balsamic perfume materials (tolu, Peru balsam, benzoin, etc.).
7. Ambrosial (musk, ambergris, etc.).
8. Pungent oils (mustard oil).

The combination of perfume materials is compared to that of a musical symphony. If the instruments are well blended there is music; if not, only a noise. A perfume results when odours are well combined; if not, there is only a smell.

Single Crystals of Metals.—Professor C. H. Carpenter, in a lecture to the Institute of Metals ("Nature," August 21, p. 266), stated that the problem of preparing a piece of metal in the form of a single crystal may be approached in two ways. P. W. Bridgman in 1923 and 1925 prepared single crystals by melting the metal in a tube tapered to a point. This was lowered through the furnace at such a rate as to allow heat of solidification to

be dissipated by conduction, and then the metal would crystallise usually as one grain, provided only one nucleus started at the bottom of the tube. Single crystals of antimony, bismuth, tellurium, tin, and zinc were made in this way. The melting is carried out *in vacuo* and complete freedom from dust is essential to success. For production of single crystals in sheets Carpenter and Elam found three treatments were necessary. The first softens the metal, completely producing equiaxed crystals so far as possible of uniform size (averaging $\frac{1}{160}$ in. in diameter). Secondly, these crystals are strained to the required extent, and the third operation was to heat the strained crystals so that the potentiality of growth conferred by the state of strain could be brought fully into operation. With aluminium the first heating was 550°C . for six hours, followed by an elongation of 1.6 per cent. in 3 in. (by stress of 2.4 tons per sq. in.), whilst the final heat treatment began at 450°C . and was raised 25°C . per day to 550° , and finally brought to 600°C . for one hour to complete absorption of small crystals on surface (which remain persistently at lower temperatures). On an average one test piece in four is converted in this way into a single crystal, the time required to grow being 100 hours. Some 7,000,000 crystals coalesce in forming a single crystal of two cubic inches in volume. Single crystal test pieces have been prepared in the form of round bars (9 in. long by 0.564 in. diameter). Single crystals under tensile stress pull down into an ellipse. Characteristic flow lines (glide ellipses) also appear, which correspond to the slipping of the metal in a new and novel way compared with the roughening of surface and maintenance of a circular section in the cup and core fracture of the "normal" bar. In the latter the crystal elements are orientated at haphazard like a jig-saw puzzle.

Sugar from Wood.—W. R. Ormandy ("Chemistry and Industry," Vol. 45, No. 33, p. 267r) describes the Rheinau and Prodor processes for obtaining sugars by the hydrolysis of wood cellulose. In the Rheinau process sawdust is dried until the water content is reduced to 0.5 per cent. and then treated in a battery of 18 diffusers, with six times its weight of 40 per cent. hydrochloric acid. The arrangement is such that the acid is left in contact with sawdust for eight hours in the first diffuser and then pushed by incoming fresh 40 per cent. acid into the next diffuser, containing fresh sawdust, for another eight hours, and so on through nine diffusers until the sugar concentration has risen from 0 to 2 per cent. in the tail of the battery to 27 or 28 per cent. in the head. The sugar solution drawn off contains approximately 28 per cent. of sugar and 26 per cent. of hydrochloric acid and 46 per cent. of water, and this must be evaporated well below 100°C . to avoid conversion of sugar into caramel. An ingenious system was devised of evaporating the bulk of hydrochloric acid in a vacuum by bringing the acid-sugar solution into contact with hot inert oil, the solution discharged containing 56 per cent. of sugar and 9 per cent. of acid. This syrup is finally evaporated in an apparatus similar to that employed for the production of milk powder. The Prodor process differs considerably, the digester being a structure some thirty feet high by twelve feet in diameter, constructed of pitch concrete (Prodorite) with twelve platforms, to which is fed from a mixer a product consisting of 100 parts of sawdust, 60 parts of water, and 46 parts of hydrochloric acid. This product is swept by revolving arms alternately to the centre of one platform, where it falls to the next, to be swept to the outside edge; thence on to the next lower platform, and so on. Further absorption of 24 more parts of hydrochloric acid takes place. A combined process of this Prodor mixer and saturator with Rheinau diffuser gives a greater throughput. The product is a biscuit-coloured powder, which is very light and hygroscopic, with the composition: Sugar, 89 per cent.; acid, 2 per cent.; salt, 2 per cent.; and water, 7 per cent. On solution in water it yields a dark brown-black solution, which requires purification according to the purpose for which it is to be used. Some 8 or 9 per cent. of pentose sugars

The Progress of Pharmacy and Allied Sciences

appears to be present, and much work has been done upon purification and fermentation of sugars from wood on behalf of the International Sugar and Alcohol Co., Ltd., Geneva. The processes are important in connection with the production of cheap industrial alcohol.

PURE CHEMISTRY AND PHYSICS

Atomic Hydrogen Flame.—I. Langmuir, in English patents 237,898 and 237,901, describes the production of an extremely hot flame for welding metals by blowing a current of hydrogen through an arc of high-current density between tungsten electrodes (20 amps. at 300 to 800 volts). The temperatures attained are higher than those of the oxy-acetylene flame, and tungsten, tantalum, molybdenum, and thorium oxide are melted with ease.

Spirit Thermometer Defect.—W. F. Higgins, of the National Physical Laboratory, in the August issue of the "Journal of Scientific Instruments," states that the lowering in readings of certain spirit thermometers (which decreased at the rate of 1° F. per month) was found to be due to the presence of acetone in the alcohol used. The effect appears to be due to polymerisation of the acetone, and 10 per cent. of this impurity is sufficient to cause a lowering of the freezing point by 1° F. every ten days during the first few months after the thermometer is made.

Illinium.—J. A. Harris and B. S. Hopkins, in the "Journal of the American Chemical Society" for June (p. 1585), describe the method adopted for the concentration and isolation in an impure state of the previously unknown element No. 61. Fractional crystallisation of the bromates of the rare earths enable absorption bands of element No. 61 to be detected at 5816 Å and 5123 Å. In addition, x-ray analysis by these research workers, along with L. F. Yntema (*loc. cit.*, p. 1595), is cited in support of the claim to the discovery of a new element, that obtained for L_{α} , (2.2781 Å) agreeing within 0.0004 Å of the calculated values, the single reading for L_{β} , (2.077 Å) varying by 0.004 Å. The lines in the arc spectrum consist of 130 lines on the red and infra red, and five lines on the violet.

Chemistry of Piperitone.—Earl and Read ("Journal of the Chemical Society," August 1926, 2,072) have made another important contribution to the chemistry of piperitone. The ease with which piperitone undergoes condensation with benzaldehyde suggested an extension of the reaction to other aldehydes. In the present paper it is shown that piperitone condenses equally readily with anisic aldehyde and piperonal. The resulting compounds are stable, easily crystallisable and very suitable for the identification of the ketone. The following compounds were prepared:—Anisylidene-piperitone, $C_{10}H_{14}O$; $CH_3C_6H_4OCH_3$ forms pale yellow crystals melting at 98° . Salicylidene-piperitone, $C_{10}H_{14}O$; $CH_3C_6H_4OH$ forms pale yellow crystals melting at 177° . Piperonylidene-piperitone, $C_{10}H_{14}O$; $CH_3C_6H_4O_2$ forms pale yellow flaky crystals melting at 128° . Opianylidene-piperitone, $C_{10}H_{14}O$; $CH_3C_6H_4(OCH_3)_2COOH$ forms pale yellow crystals melting at 157° .

Mercury Helide.—J. J. Manley described at the British Association meeting on August 10 the experiments during the last seven years on the chemical union of mercury and helium which were originally designed to illustrate the perfect inertness of helium. The first experiment, which resulted in the reluctant conclusion that these two elements entered into chemical combination, consisted of subjecting pure helium and purified mercury to an up and down movement in a chemically clean barometer tube, through which an electric glow discharge was passing. After two hours a marked contraction occurred, and within several hours the gas pressure fell from 7 to 1.8 millimetres (a loss of 74 per cent.). In an elaborated apparatus with liquid air cooling and a heater consisting of a platinum spiral, the drop in pressure was restored in heating the platinum spiral to a white heat. A cluster of globules was condensed (weighing some 230 millionth of a gram) in a tube immersed in liquid air. A new

method allowing longer contact between mercury and helium in the glow discharge led to a product being obtained which gave figures corresponding to $HgHe$.

X-Rays and Living Matter was the title of two lectures given by Professor J. A. Crowther at the Royal Institution ("Nature," July 17, p. 80), when it was stated that experiments indicate that the margin in the case of dosage is narrow. Small doses often produce a healthy stimulation, but a prolonged exposure is invariably lethal. Dr. Strangeways, in studying the action of x-rays in isolated cells, found it exceedingly difficult to destroy the resting cell, the effects of the rays only becoming visible when the cells began to divide. The first effect produced by quite short exposures was to lessen materially the number of cells proceeding to cell division, but though a small dose is sufficient to prevent the majority of the cells from dividing, a much larger dose is required before all are affected. This has probably nothing to do with the cell but the chance of these being hit by the rays, so that the survivors simply owe it to their good luck. The scanty data available suggests that a sigmoid curve corresponds better to the number of survivors than the simple experimental decrease of probability, since no effect is produced until the dose exceeds a certain value.

The Structure of Atoms.—Professor A. Fowler, in his Presidential address to Section A (Mathematical and Physical) of the British Association, stated that the electronic arrangements in the elements may now be specified with considerable confidence. A new scheme of electron distribution was included, this being derived independently by Stoner from x-ray and optical spectra and by Main-Smith from chemical considerations, and yet retains the essential features of Bohr's picture of building up the atom. The following table illustrates the differences between the newer and older schemes as regards the arrangements of electrons in the rare gases:—

Main-Smith and Stoner

	Atomic number	Electron levels									
		K 1_1	L $2_{11} 2_{21} 2_{23}$			M $3_{11} 3_{21} 3_{22} 3_{32} 3_{33}$			N $4_{11} 4_{21} 4_{22}$		
Helium ..	2	2									
Neon ..	10	2	2	2	4						
Argon ..	18	2	2	2	4	2	2	4			
Krypton ..	36	2	2	2	4	2	2	4	4	6	2 2 4

Bohr

		K 1_1	L $2_1 2_2$		M $3_1 3_2 3_3$			N $4_1 4_2 4_3 4_4$			
Helium ..	2	2			4	4					
Neon ..	10	2			4	4					
Argon ..	18	2			4	4	4	4			
Krypton ..	36	2			4	4	6	6	6	4	4

It will be seen that in the new scheme the inner sub-levels are completed at an earlier stage, and that there is a greater concentration of electrons in the outer sub-levels of each group.

Thin Films of Matter, such as occur in lubricated surfaces and soap bubbles, were the subject of a discourse to the Royal Institution of Great Britain by Sir W. B. Hardy on January 29, 1926. Life itself depends upon this fourth state of matter, for there is a film spread over the surface of each living cell, and if this be punctured at one place the neighbouring living substance becomes curdled in appearance and dies, but a membrane grows in behind, cutting the dead substance off from the rest of the cell, and thus performing the fundamental surgery of life. Naturally occurring "smooth" surfaces are covered by a film of grease, but these feel harsh when specially cleaned if the finger tips are freshly washed. Oil films which are so tenuous as to be invisible can "smooth" a sea. The surface of water coated with oil acquires the property of forming free films which may have an endurance comparable even with that of a soap bubble. On plotting the surface tension

The Progress of Pharmacy and Allied Sciences

against the quantity of oleic acid per unit area of surface a curve is obtained which closely resembles that for time duration of bubbles (*versus* oleic acid). The bubbles are most stable when the film of contamination is just dense enough to begin to alter the surface tension, but the bubbles have no stability when contamination is either vanishingly small or very great. The characteristic smoothing of the sea by oil is due to suppression of ripples and wavelets, for when these cease to be formed the chief "catch" to the wind is lost.

DENTISTRY

Treatment of Oral Sepsis.—F. W. E. Wagner ("British Journal of Dental Science," August 1926) states that tartar should be removed with meticulous care, and a good solvent for this purpose is a 20 per cent. aqueous solution hydrogen ammonium bifluoride with 10 per cent. free hydrofluoric acid. This solution should be used from a platinum-pointed syringe with a rubber bulb and a celluloid barrel. If there is much inflammation the solution should be diluted with an equal quantity of water for one or two applications. If applied pure at first in such cases, it will cause considerable pain. The technique is as follows: Protect the gums with cotton wool, for if the solution is allowed to dry on them it will cause a burn. Gently flow a little of it from the syringe round the neck of each tooth and into any pockets, wiping off any excess. Make two or three applications at intervals of a week, when the tartar will easily come away. Do not let the patient rinse the mouth after an application; the saliva has a soothing effect, and the solution itself will stimulate reattachment of gum to tooth. The gums should be vigorously brushed with a stiff brush and floss silk should be regularly used for cleaning the spaces between the teeth. A liquid dentifrice is preferable to powder or paste, and an antiseptic mouth-wash. Either of the following is a suitable dentifrice:—

Tr. quillaie ..	3ij.	Tr. pyrethri ..	3iv.
Ol. menth. pip. ..	℥iv.	Saponin. ..	gr. x.
Ol. gaultheriae ..	℥ij.	Spt. menth. pip ..	3ij.
Ol. caryoph. ..	℥ij.	Ol. gaultheriae ..	℥x.
Elixir saccharin. ..	3ss.	Tr. myrrhæ ..	3iv.
Spt. rectif. ..	ad 3ij.	Spt. rectif. ..	ad 3ij.

For a mouth-wash hydrogen peroxide diluted with an equal quantity of water, or the following, may be used:

Phenol ...	3vj.
Caustic soda (sticks) ...	3i.
Aq. ...	ad 3iv.

One teaspoonful in half a tumbler of hot water.

Research on the Casting Process.—R. L. Coleman ("Dental Cosmos," August 1926) deals with a report of the Bureau of Standards describing the careful research which has been made of investing materials, waxes, modeling compounds and golds. Among the conclusions drawn from the data given are the following:—The average coefficient of thermal expansion of the inlay waxes tested is approximately 600 millionths of the original length per degree centigrade over the temperature range of room temperature to 38° C. The usual investments for inlay casting expand on setting. This linear expansion is approximately ¼ per cent. The setting is accompanied by a rise in temperature of about 5° C., which is sufficient to affect the wax pattern. The investments may be expanded approximately 0.2 per cent. by heating to 250° C. to 300° C. Heating to 350° C. to 450° C. results in the loss of this expansion and in some cases in a net contraction. By heating to approximately 600° C. an expansion of about 0.5 per cent. may be obtained. Cooling from any of the above temperatures is accompanied by a relatively large contraction. The compression strength of these investments is not seriously affected by heating to temperatures between 200° C. and 800° C. Cooling from these temperatures results in a very marked loss of strength. The relative porosity of these investments, or the rate at which air at a given pressure may be forced through them, decreases as the plaster content increases, and also as the water content

decreases. Surface defects caused by air-bubbles in the investment may be largely eliminated by a very thorough mixing of the investment powder and water, preferably with a mechanical mixer, or by mixing the investment in vacuum. From the analyses of a large number of dental casting golds, it is seen that there are wide variations in composition of alloys intended for the same uses. The net linear casting shrinkage of an alloy containing 90 per cent. gold and 10 per cent. copper was found to be 1¼ per cent. The internal voids generally present in dental castings appear to be due largely to localised shrinkage and to occluded gas. Careful tests failed to reveal any serious segregation of the constituent metals of the gold alloys tested, when cast under dental conditions. Partial elimination of certain of the constituent metals of dental gold alloys or an "unbalancing" of the alloy may be caused by overheating in melting. When the alloys are melted and cast with reasonable care, this effect is usually negligible.

ESSENTIAL OILS

A New Elemi Oil.—Schimmel & Co. ("Bericht," 1926, 27) describe an elemi oil obtained from elemi resin gum, Java, from an undescribed species of *Canarium*. From the oleo-resin, 16.7 per cent. of essential oil was obtained having the following characters:—Specific gravity 0.8517; optical rotation +104° 35'; refractive index 1.47779. It gave a strong reaction for phellandrene.

Italian Pennyroyal Oil.—Liotta ("Rivista Italia Essencia di Profumi" 1926, 8, 44) records the characters of the essential oil from Italian *Mentha pulegium*. The yield was from 0.35 to 0.5 per cent. of a straw-coloured oil, having a specific gravity 0.840; optical rotation +26° 30', and acid value 0.31. The oil contains 62 per cent. of pulegone and piperitone, and traces of esters.

Adulterated Coriander Oil.—Messrs. Schimmel & Co. ("Bericht," 1926, 23) describe a coriander oil which they found adulterated with terpineol. The oil had the following characters:—Specific gravity 0.9037; optical rotation +5° 52'; refractive index 1.47319; acid value 1.5; ester value 14.9. It was soluble in 1.8 or more volumes of 70 per cent. alcohol. The acetyl ester value of a pure coriander oil is about 156-160. The sample in question had an acetyl-ester value 182.9, and the fractional saponification of the acetylated oil showed a difference value of 42 as against a normal 2 to 4.

Oil of Pseudo-tsuga Douglasii.—Alinari ("Annali di Chimica Applicata," 1926, 16, 185) has examined a specimen of this essential oil, prepared from the needles of the tree grown in the forest of Vallombrosa. The oil was of a greenish-yellow colour and had a pleasant aromatic odour. It had the following characters:—Specific gravity, 0.8712; specific rotation, -24.43°; refractive index, 1.4736; ester value 18.87, equivalent to 6.6 per cent. of bornyl acetate; ester value of the acetylated oil 52.29, equivalent to 9.9 per cent. of free alcohols calculated as borneol. The oil consists mainly of β-pinene, and contains geraniol and nerol and their acetic and capric esters.

Germicidal Values of Australian Oils.—In a paper recently read before the Royal Society, N.S.W. (Journal and Proceedings of the N.S.W. Royal Society, vol. LIX, p. 346), A. R. Penfold and R. Grant publish the continuation of their investigations on the germicidal values of Australian essential oils and their pure constituents. The earlier papers in this series were published in vol. LVII, p. 211, and vol. LVIII, p. 117. The present paper contains the examination of a series of esters of butanol. In order to carry out the Rideal-Walker tests suspensions of 1 per cent. of the bodies were prepared in 7½ solution of resin-soap. Formic acid and normal butyric acid were, however, prepared in aqueous solution. A few bodies were also prepared in ethyl alcohol. The most noteworthy result shown in the tables is the high coefficient of butyl butyrate, which is 13 in soap solution, and 17 in ethyl alcohol. A correction is made of the Rideal-Walker coefficient of terpineol, which was previously given as

The Progress of Pharmacy and Allied Sciences

7.5 (vol. LVII, p. 87). The correct value should be 16. The earlier result is explained by the difficulties of dispersion of alcohols in soap solution, which often cause a considerable depression of the coefficient due to the difference in the size of the particles. The presence of small quantities of cymene in admixture with terpenes raises the Rideal-Walker coefficient out of all proportion to the quantity of cymene contained. It is pointed out that this is of value for the rapid detection of the presence of cymene in such mixtures.

Oil of *Baecka Gunniana* var *Latifolia*.—The characteristics of the oil of this variation of *B. Gunniana* have been investigated by A. R. Penfold (Journal of the Proceedings of the Royal Society, N.S.W., vol. LIX, p. 351). The oil is the first known instance of an Australian oil which is solid at ordinary temperatures m.p. 43°-47°. The oil is of a dark brown colour, solidifying to a battery consistency and having a terpenic odour. Its principal constituents are eudesmol 60 per cent., eudesmene, β -pinene, a yellow stearoptene $C_{31}H_{50}O_4$, and a small amount of an unidentified phenol and valerianic acid ester. On distillation of three samples of leaves the following characters were obtained:—

Yield of oil %	Melt- ing point	Specific gravity	Optical rotation	Ref. index 20°	Sol. in 70% al.	Est. No. Hot. sap.	Est. No. after acety- lation
0.74	43°	0.9679 18° (15°)	+15.6°	1.5059	Sol. in 3 vol.	15.73 (acid No. 2)	139.77
0.33	46½- 47½°	0.9550 26° 15°	+23.0°	1.5038	„ 3 vol.	11.44	138.38
0.46	45°	0.9578 (15°) (15°)	+18.0°	1.5049	„ 2 vol.	23.19	151.80

On fractional distillation of 36 c.c. of mobile oil left after steam distillation of 120 c.c. of crude oil, two main fractions were obtained, one boiling below 70° at 10 mm. 7 c.c.; the other at 128-142°, 20 c.c. Oxidation with pot. permanganate in the presence of sodium hydroxide showed the lower boiling fraction to consist of β -pinene, having characters: Specific gravity $\frac{15^\circ}{15^\circ}$ 0.8713, optical rotation +2°, refractive index 20°, 1.4742. The higher boiling fraction had characters specific gravity $\frac{15^\circ}{15^\circ}$ 0.920, optical rotation -11.7°, refractive index 20°, 1.5020. It gave the two colour reactions usual with Australian sesquiterpenes, but did not yield any solid derivatives. It is probably identical with eudesmene. The residue from the distillation of the crude oil had all the physical characters of eudesmol, and on treatment with dry hydrochloric acid gas yielded eudesmene dihydrochloride. It is undoubtedly identical with eudesmol.

FIXED OILS AND FATS

Olive Oil of the best quality as regards aroma and stability is obtained from slightly immature olives, states F. Traetta-Mosca ("Annali Chim. Appl.," Vol. 16, p. 169), but a poor yield of bitter oil results if the fruit is too unripe. A good oil is yielded by fully ripe olives. Discoloured oil which readily becomes rancid is obtained when the olives are left too long on the tree, or if these become fermented owing to being kept in heaps between gathering and pressing. The acid value of good oils is between 1.02 to 1.22.

Fat Extraction by Solvents.—A new type of extraction plant for removal of fats from oil seed by solvents was described by L. W. Simon and J. W. Hinchley at the recent Congress of Chemists ("Chemistry and Industry," Vol. 45, No. 31, p. 252r). Its industrial possibilities arise from the fact that only small quantities of

material are dealt with, the rate of solution of fat being high with thorough removal of solvent from meal. This is achieved by conducting operations in a rotating cage containing meal to the depth of only a few inches during subjection to continuous agitation with the solvent. With light solvents, such as benzene or light petroleum, three flushes are required for satisfactory commercial extraction, but whereas a plant treating three tons of meal as one charge requires seven tons of solvent, the new machine requires only one ton for the same throughput. There are three cylinders, which contain some four cwt. of material, but the output in eight hours is three to four tons, as the total extraction time is approximately thirty minutes, with about five minutes for steaming off solvent. The cage or basket containing the meal consists of a perforated drum rotating on a hollow shaft, through which solvent and steam enter. The drum is filled by removal of one of the end-plates. After filling it is inserted into a cylinder containing gearing for rotating the cage. After driving out most of the air with steam, the complex cycle of operations of charging and discharging solvent is conducted by valves controlled automatically by a rotating cam and worked by hydraulic pressure. As the cage rotates slowly, a highly saturated solution of fat (Solution No. 3) enters, and is run off for distillation. Next a No. 2 solution passes through and enters No. 3 solution tank, and then solution No. 1 traverses the meal on its way to No. 2 solution. Finally, the rate of rotation of the cage is raised, and clean solvent then enters, this being the final flush, which goes to No. 1 tank. Then the cage continues to revolve and expel solvent by centrifugal force, aided by steam heating with closed coils in the cylinder. This continues until the temperature of the meal becomes as near as possible that of the steam, when finally direct steam is admitted to remove last traces of solvent. The most highly concentrated fat solution discharges into a regulating still. This, whilst continuously evaporating solvent by means of a closed steam coil, converts the intermittent flow it receives into a regular stream of liquid entering six small stills (in two sets of threes). Each of these contains a tray with independent heating coil, so that liquid travels along it at a depth of about $\frac{3}{8}$ in. only. Perforated steam coils in the last pair of stills remove the final traces of oil by "wet" steaming. L. C. Whiton, in "Industrial and Engineering Chemistry" for June (p. 605), discusses "Oil Extraction in Theory and Practice." Theoretically, it should not be much more difficult to extract 50,000 lb. of oleaginous material in one batch than 5,000 lb. Practically, it is impossible to deodorise the residual meal, as was found in a large flaxseed plant built several years ago. This unfortunate experience has probably hindered the development of solvent extraction. Contrary to usual engineering practice, the fewer the refinements the better the extraction, a laboratory Soxhlet on a commercial scale being almost ideal. The Bataille extractor is described with a capacity of about 5,000 lb. of meal. The circuit is from solvent to tank, then by draining (through filter) to still, which returns solvent to tank via a condenser. The solvent generally used is light petroleum boiling between 60° and 80° C. Trichlorethylene is also in use, because it is not inflammable, and ethylene dichloride is similar except the makers claim that it hydrolyses less; but it has the disadvantage of being slightly inflammable (about one-sixth that of light petroleum). Carbon tetrachloride is not used because it attacks the container.

MATERIA MEDICA

Homotrilobine.—T. Nakazato ("Yakugakuzasshi," June 1926) succeeded in isolating a second alkaloid from *Cocculus Trilobus*, on treating the mother liquor remaining after the separation of trilobine hydrobromide. The new alkaloid, for which he suggests the name homotrilobine, crystallises in colourless anhydrous prisms, melting point 213° to 215° C.; $[\alpha]_D^{19.5} +293.1^\circ$, corresponding to the formula $C_{20}H_{21}NO_3$.

The Progress of Pharmacy and Allied Sciences

Hydrastis Adulterants.—G. Blaque and J. Maheu ("Bulletin des Sciences Pharmacologiques," June, 1926) report that they have recently found that three drugs are now being used to adulterate commercial supplies of hydrastis. These are: (1) the rhizome of *Coptis Tecta* (Salisb.) Wall.; a small plant which occurs in Assam, China and Cochin China, and has long been in use in India, where it is sold in the bazaars under such names as tita, mishmi-tita, mamiran, for the treatment of certain affections of the eye; (2) the rhizome of *Xanthorrhiza Apiculata* L'Hérit, a shrub indigenous to North America, found principally in mountainous regions between the State of New York and Florida, and known as shrub yellow root, or southern yellow root; (3) the roots of a species of *Paeonia*, probably a variety of *Paeonia officinalis*, this adulterant is easily detected by the presence of bundles of calcium oxalate crystals, which are always absent in hydrastis. It is interesting to note that the use of these three drugs as adulterants of hydrastis has not previously been recorded.

MEDICINE

Sanocrysin in Tuberculosis.—A second report by the Medical Research Council has recently been issued ("Lancet," II, 1926, p. 181), in which the results observed at various clinical centres in Great Britain and Northern Ireland are outlined. Experience in the selection and treatment of cases has greatly lessened the dangers attending the use of sanocrysin. The first collective report by the Medical Research Council described two deaths directly caused by sanocrysin out of a total of about 30 cases treated. This second report records only one similar fatality (Royal Victoria Hospital, Belfast) in a much larger number of cases treated, about 140. But the risk remains. The trial has shown how dangers may be averted, and, in the opinion of some workers, it has given indication that along the line of some such substance as sanocrysin there is definite hope of a drug treatment that will check the progress of a tuberculous infection and allow the patient's natural powers of resistance better play in finally arresting the disease. The report emphasises the general need for extreme care in the use of sanocrysin and the particular types of infection in which it may be expected to cause some improvement.

Blood Origin of Asthma.—Basing himself on the results of a study of 1,431 cases of asthma, G. N. Jack ("New York State Journal of Medicine," June 15, 1926) comes to the conclusion that asthma is of blood origin, and is not a nerve reflex or spasm. He maintains that there are three well-defined vicious circles of asthma, namely, the lymphocytic, the toxic-leukocytic and the anemovascular. From thirty minutes to two or more weeks before an attack of dyspnoea, the nutrition, metabolism, and general physico chemics of the blood and lymph of the asthmatic patient are unusually distributed or perverted, as manifested by polyuria, a coated tongue, flatulency, indicanuria, chyluria, acidosis or occasionally glycosuria. The stools are generally toxic, putrid and alkaline, with a rotten egg or meat odour, or they are acid, gaseous, fermenting with a disgusting, irritating, penetrating odour, often showing mucus and particles of undigested food. This disturbed nutrition produces toxic substances or deleterious chemical reagents that, when absorbed from the intestine by the lymph and blood, either in the form of gases, liquids or putrefactive alkaloids, so interfere with the chemistry of the asthmatic patient's unstable blood that it disintegrates. After the blood disintegrates, it becomes loaded with a waste and useless material, which must be dumped, and will be dumped along the line of least resistance, which in the asthmatic patient is the mucous membranes of the head and air-tubes. The disintegrated material must be eliminated from the blood by starvation, the drinking of hot water, cathartics, as castor oil and liquid paraffin (equal parts), or cascara, and by diuretics and expectorants. Cathartics that increase the viscosity of the blood, such as Epsom salt, should not be used. The blood should be kept slightly plus in alkalinity by the

manipulation of the diet and, occasionally, the administration of alkalis. When there is any tendency to oedema, salt should be restricted. The re-adjustment of the asthmatic patient's unstable blood must be assisted by prescribing foods that contain the deficient blood chemicals and that are rich in vitamins and chlorophyll.

Cod-Liver Oil in Rickets.—A study made by M. G. Wilson ("American Journal of Diseases of Children," May 1926) of infants, aged from one to three months, born in the spring and summer of 1924, receiving graduated doses of from one-half to one and a-half teaspoonfuls of a biologically tested cod-liver oil, revealed the development of clinical rickets in 91 per cent. of the subjects. A more intensive study of forty-seven infants, aged from two weeks, born in the winter of 1925, receiving daily doses of one, two and three teaspoonfuls of biologically tested cod-liver oil, showed the development of clinical rickets in 68 per cent. of the cases, as compared with 76 per cent. of the control series of thirty cases. Ninety-seven per cent. of infants born in the summer, and 91 per cent. of infants born in the winter, who received cod-liver oil, showed roentgenographic evidence of rickets. Ninety-seven per cent. of the infants born in the summer, and 98 per cent. of infants born in the winter who did not receive cod-liver oil, showed roentgenographic evidence of rickets. Rickets was observed earlier by x-ray than by clinical examination, being observed in 4 per cent. at one month and in 23 per cent. at two months of age, compared with a total of 4 per cent. at two months by clinical examination alone. By the fourth month rickets was present in the majority of infants of both groups. The early age incidence of the development of rickets observed indicates the necessity for measures of prevention or control to be instituted in the first month, particularly for babies in winter. The correlation of the clinical and roentgenographic evidence of rickets observed at the various age periods in this investigation indicated that active rickets is encountered most frequently in the first six months of life, and healing rickets after six months. There did not seem to be any relation between the degree of rickets observed and the amount of cod-liver oil received. Infants receiving cod-liver oil showed rickets that healed earlier than that of the control series. The nature of the relation of cod-liver oil therapy to the development of rickets, as observed in these studies, would seem to be one of control rather than of prevention.

OPTICS

The Nature of Polishing.—F. W. Preston ("Transactions of the Optical Society," 1925-26, No. 3) points out that during the process of glass polishing, glass is continuously removed, and the rate of removal does not slow down with time. Coarse rouge is better than fine for polishing, provided it is not so coarse as to produce streaks visible without etching. Any clear signs of flow or fusion represent defects of polishing, but the mere fact that such phenomena do seem to occur, if the temperature is allowed to rise somewhat, suggests that "flow" or fusion of some sort on a molecular scale may in fact be operative simultaneously with the more important phenomena of mechanical abrasion. The evidence for a surface layer on polished glass, differing from the underlying material and from the surface layers of ground, or fire-glazed or crystalline surface layers in the case of quartz, is slight or negative. Whether tested for interfacial tension, solubility, electric properties, refractive index or microscopic properties, there seems to be no satisfactory evidence of any distinctive flowed layer, while a study of the rates of abrasion and the properties of abrasives used suggests that the process is principally one of ultra-microscopic abrasion. A study of the failure of the principle of similitude in the formation of flaws by grains of different sizes suggests that the process of polishing may be a process of abrasion complicated by the fact that the fissures produced by one grain lie in the territory of its neighbour, and that the abrading efforts of the several grains tend to neutralise one another.

The Progress of Pharmacy and Allied Sciences

Low Errors of Refraction.—O. Aves ("Transactions of the Optical Society," 1925-26, p. 191) states that the examination of a great number of tests on the eye reveals a large proportion of low errors of refraction, and he suggests certain modifications of the usual technique when testing such cases. The author considers that objective methods of examination are useless in the estimation of errors under one diopter. The recommendation of subjective methods in these cases implies a close cross-examination conducted so that the patient is unaware that reliance is placed on his opinion. The question of "how he sees" involves the elusive problem of "how he feels" when seeing, and it is the factor of feeling which is of paramount importance. The reason for condemning priority of the objective test is that 90 per cent. of the cases presented to the refractionist are of purely refractive or muscular error, the majority having vision 6/9 and a large proportion 6/6. Submission of these cases to unaccustomed glare produces distinct after-images, physical discomfort, and an artificial mental condition. In subjective testing it is suggested that convex spheres should be added binocularly—before testing the eyes separately—first using one diopter, and, if necessary, further additions of a half diopter or less, asking at each stage, "Can you still make out that line?" The question must be asked without emphasis. Fogging to any extent greater than two or three lines beyond the original is unnecessary, and if the patients' facial expression has answered the above question, "Can you make out any of the letters on *this* line?" pointing to a line or two above should be asked. The reason for adding spheres binocularly is because the blocking of one eye is usually subconsciously resented. Relaxation of accommodation is also easier with the two eyes working in unison. Other important points in technique include the smooth changing of the lenses without allowing the eyes to be uncovered by a lens or covered by two lenses, i.e., the lens substituted must be inserted before the pupil as the other is withdrawn; it is necessary to under-correct as well as to over-correct while testing; great attention must be paid to the axis of the cylinder, five to ten degrees making the difference between comfort and discomfort; the possible presence of slight irregular astigmatism should not be overlooked.

PHARMACOLOGY

Enemata and Metabolism.—T. M. Carpenter, in the "Proceedings of the Washington National Academy of Sciences" (Vol. 12, No. 6), suggests that alcohol, dextrose, and laevulose administered by rectal injection are utilised in bodily metabolism in the same manner as that ordinarily used in producing muscular energy. Ethyl alcohol administered by rectal injection is rapidly absorbed, increasing pulse rate and lowering respiratory quotient. Water is eliminated, but not other tissue constituents. Absorption of dextrose and laevulose is slower and less complete, but utilisation of carbohydrate is indicated by an increase in the respiratory quotient.

Hydrocyanic Acid New Antidote.—Some interesting experiments with hydrocyanic acid have recently been made by Dr. Violle, professor of hygiene in the Marseilles School of Medicine ("Lancet," II, 1926, p. 94). A concentration of 2 gm. of hydrocyanic acid per c.m. of air will kill an animal in a few minutes, but Dr. Violle has discovered that animals which have previously had a dose of glucose (by injection or by mouth) can breathe this toxic atmosphere for more than an hour without ill-effects. The glucose apparently enables them to neutralise hydrocyanic acid and the tissues are able to deal with relatively enormous quantities. These findings, if confirmed, should have a practical application, since glucose might be used as a prophylactic by those whose work brings them into contact with the gas itself—e.g., in cleaning ships of rats—and those who have to handle cyanide compounds.

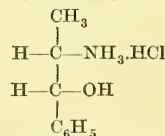
Opium Antagonism to Other Drugs.—T. M. Allison writes ("Lancet," I, 1926, p. 1280) that, in his experience, Dover's powder should not be compounded with aspirin. In many cases it acts well, but in some cases

susceptible to opium it retards the action of aspirin as regards secretion and causes serious danger. Caffeine gr. j. (instead of the Dover's powder) and followed by hot toddy is far safer and better in pneumonia and influenza. Small doses of morphine act capriciously, and morphine should always be given in a single dose, and for a definite purpose. He has observed iodism from gr. ij. of potassium iodide when combined with tr. camph. co. in small doses. If a sudorific does not set up free perspiration it becomes dangerous, the most striking example perhaps being the hyperpyrexia of acute rheumatism from sodium salicylate retention, when perspiration stops. Morphine, in his opinion, should always be used alone.

Action of Liquid Paraffin on the Intestine.—From fluoroscopic studies on cats, A. Láncoz ("Archiv für experimentelle Pathologie und Pharmakologie," May, 1926) concludes that liquid paraffin cannot be regarded simply as a lubricant. It hastened the passage of the contrast meal through the stomach and small intestine, and visibly increased peristalsis in these organs. It did not appear to affect the large intestine. Defecation was excited in the normal manner from the rectum, and usually did not result in complete evacuation of the intestine. The closure of the sphincters of the pyloric antrum and of the pylorus brought about by morphine was almost without exception weakened or prevented by liquid paraffin. It is probable that the therapeutic effect of the substance is owing to its antispasmodic action in keeping away irritations, but it may be due to direct nervous stimulation of movements in the stomach and bowel.

Cyanide is a specific poison of the sulphur system of the tissues is the conclusion arrived at by C. Voegtlin, J. M. Johnson, and H. A. Dyer ("Journal of Pharmacology and Experimental Therapeutics," Vol. XXVII, No. 6, p. 467). They find a biological antagonism between cyanide on the one hand and cystine, cysteine, and glutathione on the other. The results obtained were very definite, and indicate that with rats a *proper dose of the sulphur compounds will prevent death from cyanide*. Amino-acids, creatinine, and glucose did not afford any protection, and the action of cystine and its derivatives is essentially due to these sulphur groups. Sodium thio-sulphate and thioglycolic acid, which do not occur normally in the animal organism, were also found to protect against cyanide, and as they contain sulphur in an active form, confirm the foregoing view, which adds further evidence that the sulphur system maintains normal biological oxidation reductions. Specific disturbances in this, due to specific poisons (arsenic, cyanide, methylene blue, copper and gold salts) result in death.

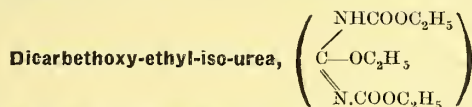
Ephedrine is the subject of an exhaustive review by K. K. Chen and C. H. Kao, in the "Journal of the American Pharmaceutical Association" for August (p. 625). This gains in importance owing to recent pharmacological research revealing the fact that ephedrine acts qualitatively the same as epinephrine (adrenalin), but with the advantages of more prolonged action and effectiveness when administered by mouth. The base is an oily substance, as obtained by shaking out with ether, which crystallises in colourless needles or rosettes on standing, melting at 39 to 40° C. The hydrochloride melts at 214 to 216° C., and is laevogyrate [α]_D - 34.96°, corresponding structurally to:



Influence of Dihydroxyacetone on Blood Sugar.—E. H. Mason ("Canadian Medical Association Journal," April 1926), basing himself on the results observed in thirty-four cases, states that, in patients with a normal carbohydrate tolerance, the ingestion of dihydroxyacetone in

The Progress of Pharmacy and Allied Sciences

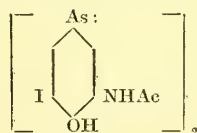
25- or 50-gram doses results in a very slight transitory rise in the blood sugar. When it is given in small interrupted doses there is a progressive fall. In diabetes mellitus the increment increase in blood sugar is not as great after dihydroxyacetone as after a like dose of glucose. When it is introduced intravenously in a dose of 25 grams diabetic patients, with a fair carbohydrate tolerance, show very little rise in the blood sugar. Dihydroxyacetone, ingested in small but frequent doses in three cases of diabetes mellitus in short period experiments, could not be accounted for by the glucose excretion and the tissue retention. The results are suggestive that in certain cases of diabetes mellitus the ingested dihydroxyacetone is not quantitatively converted into glucose.



according to S. Basterfield and L. E. Paynter ("Journal of the American Chemical Society," Vol. 48, No. 8, p. 2176), possess a well-marked physiological action. In rabbits in doses of 0.35 gm. per kilogram drowsiness and inco-ordination are apparent within five minutes, and in twenty minutes muscular relaxation is complete, and all reflexes were sluggish. There were signs of recovery from the deep depression within two hours, but after five hours there was still considerable drowsiness and inco-ordination. Rectal temperature fell rapidly during the first two hours (in one animal by as much as 4.2° C.), but without the production of shivering or rigor. All the animals treated recovered fully within twenty-four hours, and did not exhibit any harmful after-effects. Studies in the oxygen consumption of treated animals indicate that the fall in temperature must be due to increased heat loss. This effect is similar to the antipyresis induced by acetanilide and allied compounds.

Irradiated Oil in Tuberculosis.—Villaret, Justin-Besançon and Fauvert ("Presse Médicale," June 16, 1926) mixed 6 grams of cholesterol with 1,000 grams of oil (artificially enriched and made unsaponifiable), and exposed the mixture to the ultra-violet rays for half an hour or an hour. The special properties acquired by the oil from this irradiation were retained for at least a year and a half. From 10 to 20 c.c. of the irradiated oil was injected in pleurisy with effusion, then the effusion was aspirated, and up to 500 c.c. of the oil injected. This indirect local actinotherapy seemed encouraging also in profuse effusions following induced pneumothorax, and in purulent tuberculous pleurisy. For general treatment of pulmonary tuberculosis, cholesterol, treated with ultra-violet rays from twenty minutes to two hours was used alone. A teaspoonful was given by the mouth once a day. This was combined with calcium salts. The treatment never induced fever, or any complications in the digestive tract. Improvement of appetite and increase in weight were the immediate results. Ingestion of the irradiated cholesterol was well tolerated by the tuberculous, even those with fever, while the contrary is observed under direct application of ultra-violet rays.

Iodine Compounds of the Salvarsan Group.—A. D. Macallum ("Journal of the Chemical Society," July, p. 1645) describes the synthesis of several compounds allied to 5:5'-di-iodo-3:3'-diamino-4:4' dihydroxybenzene, which is difficult to obtain uniform. The most effective of these is 5:5'-di-iodo-3:3'-diacetyl-amino-4:4'-dihydroxy-benzene:



This is a lemon-yellow powder, melting at 194° C. after entering at 180° C., which is soluble in acetone, phenol, benzaldehyde, or pyridine. Its dilute solutions in alkali carbonates or hydroxides undergo little apparent change

on exposure to air. The maximum dose tolerated by mice is 0.2 to 0.25 gm., and the curative dose for mice infected with *Trypanosoma equiperdum* is 0.015 to 0.02 gm. per kilogram of mouse. The substance thus closely resembles salvarsan in this respect, but is also remarkably stable in solution and does not produce any undesirable nervous effects.

Breathing at High Altitudes.—New physiological facts of striking character were obtained during the Mount Everest expeditions, stated Dr. J. S. Haldane in a lecture to the British Association, on August 10, on "Acclimatisation at High Altitudes." Acclimatisation sufficient to prevent mountain sickness could be obtained at 27,000 feet, though to an unacclimatised individual a stay of any duration would mean certain death. Mr. J. B. S. Haldane, in chamber tests at barometric pressure equivalent to 21,000 feet, was within two hours reduced to a condition of failing consciousness and respiration. In these experiments the addition of a small proportion of oxygen (equivalent to one litre per minute at atmospheric pressure) facilitated enormously heavy muscular exertion, which, indeed, was impossible without oxygen. Anticipation of a similar effect on Mount Everest was only partially fulfilled. In thoroughly acclimatised climbers there was not only a great increase in oxygen secretion, but also a great fall in pressure of carbon dioxide in the alveolar air, and consequently a great increase in the volume of air breathed. This increase caused little or no inconvenience, and when staying overnight they could sleep well. Muscular work, however, lead to intolerable panting, and the greater the altitude the less work could be done owing to limitations in power of panting. At the higher camps the alveolar carbon dioxide was evidently so much reduced that quite apart from oxygen shortage the rate of climbing was cut down to a fraction of the sea level. Hence the relief from oxygen was so small as to be hardly worth the extra trouble and weight carried, though, curiously enough, a climber totally unacclimatised could ascend the whole way climbing as rapidly as at sea level if provided with oxygen, though he would be in serious danger if the oxygen apparatus broke down. Without the assumption of an active secretion of oxygen inwards in the lungs, it was hopeless to try to account for the acclimatisation at high altitudes.

Cancer.—Dr. Otto Warburg, at a recent meeting of the German Chemical Society, stated that the cancer problem is one of cell physiology. A bacillus does not cause cancer any more than diabetes, the carcinoma originating from normal cells, but the tumour contains less glucose and consumes less oxygen than normal tissues, owing to lactic fermentation of glucose. A general characteristic of carcinoma and sarcoma cells independent of irritation or tissue structure is a state of asphyxia so far as its metabolism is concerned. Whereas normal cells only produce lactic acid when deprived of oxygen, asphyxiated (cancerous) cells produce lactic acid in excess even when oxygen is restored. The conclusion arrived at is that asphyxiation of normal growing cells is sufficient to produce the cancerous state.—Barbara E. Holmes, in the "Biochemical Journal" (Vol. XX, No. 4, p. 812), also refers to the anaerobic habit of tumour tissue in converting glucose into lactic acid with great rapidity, compared with slower oxidative removal. She finds that rat sarcoma, rat carcinoma, and human mammary carcinoma contain abnormally small amounts of reduced glutathione. The respiratory pigment cytochrome is always found in aerobic tissues, especially those which might be expected to show great metabolic activity, but there is very little in tumour tissue, whereas in the grey matter of brain there is a high concentration. The results are held to support strongly the contention of Warburg that the cancerous cell may live in some respects like an anaerobic organism.—J. R. Howitt, in a letter to "Nature" of August 21, states that extracts from livers are being used for the treatment of malignant tumours at the McGregor Mowbray Clinic, Hamilton, Ontario. In experiments on mice with transplanted marsh tumours injections distant from the site

The Progress of Pharmacy and Allied Sciences

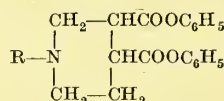
result in total necrosis of the tumour tissue, degeneration commencing at the periphery. It is stated that a preparation containing the "active principle in a highly concentrated form" can be rapidly and economically obtained from beef livers, and that these do not cause any change in blood pressure. Clinical results to date include complete disappearance of tumour mass with one patient and reduction in size of growth with others. So far only inoperable and otherwise hopeless cases have been treated, but in every case the progress of the disease has been arrested.

Hepatic Extract in Hypertension.—In a systematic search for some product of metabolism having a pressor effect, R. H. Major ("Journal of the American Medical Association," July 31, 1926) found that methylguanidine, a normal component of the urine, is capable of producing a marked and prolonged elevation of blood pressure in animals and in man. A further study of the urine in certain cases of arterial hypertension showed a diminished output of guanidine compounds when compared with normal cases. In a series of experiments carried out in the laboratory, the author studied the action of various salts and organ extracts which lower the elevation in blood pressure produced by guanidine compounds. Among the various substances examined, the effects of certain liver extracts were very marked in both reducing and preventing what we may term a guanidine hypertension. The liver extract which the author employed is prepared by a process of alcoholic fractionation, the depressor substance being thrown down as a precipitate when an alcoholic content of approximately 90 per cent. is reached. This precipitate is dissolved in distilled water and is further purified by repeated adjustments of the reaction. The final purified precipitate is dissolved in saline solution, giving a clear, slightly brownish solution, which contains in the concentrations usually employed a nitrogen content of 0.001 per cent. Coincidentally, a method was elaborated which gives an adequate index of the activity of liver extract. This method consists essentially in introducing a dilute solution of methylguanidine sulphate through the femoral vein of a cat or a dog until a definite rise in blood pressure to 20 mm. or more is produced, and then the liver extract is slowly introduced into the other femoral vein until the blood pressure is stabilised. The amount of guanidine solution injected is read off, together with the quantity of liver extract necessary to neutralise the guanidine. The temporary unit employed by the author is the amount of depressor substance necessary to neutralise 0.1 mg. of guanidine in an animal weighing 2.5 kilograms. Up to the present time approximately 100 patients suffering from high blood pressure have been treated with liver extract. In many of these patients improvement in symptoms has been the most striking feature noted. In some instances the improvement in symptoms has been associated with a fall in blood pressure; in other patients no such fall in pressure has been noted.

White Snakeroot Poisoning.—*Eupatorium urticaefolium*, the white snakeroot, sometimes called boneset, polewort or squaw weed, grows from 1 to 4 feet high and is widely distributed in the Western states of North America, from Minnesota to Louisiana and eastward. Investigators have determined that the trembles in cattle arise from their eating white snakeroot, and that the cause of "milk sick" in humans is the consumption of milk and butter made from the milk of cows that have eaten white snakeroot. This disease was recognised as far back as 1776 in North Carolina. Over many years it has taken lives in Tennessee, Ohio, Indiana, Illinois, Missouri and other Mississippi states in which it is endemic. Still there are large quantities of snakeroot in the woodlands along streams in all these states. Six deaths were reported in 1925 in Illinois from milk sick, and no doubt others were unrecognised. Nine cases with no deaths occurred in Grundy County, and a large number of cattle died. W. E. Walsh ("Journal of the American Medical Association," August 21, 1926) reports that he has seen forty-four cases of milk sick in

thirty years, and knows indirectly of about sixty more. As a result of his clinical observations, the author concludes that it is evident that, when man consumes the milk of cows that are eating white snakeroot or butter made from the milk of these cows, he ingests a poison that causes fatty degeneration of all the tissues, especially the liver and the pancreas. It is probable that the snakeroot poison destroys so many cells that the body is incapable of carrying on its normal chemical processes and that, consequently, we have recurrence of acidosis every time the individual attempts to eat normally or work to capacity somewhat the same as in diabetes. No sugar was found in the urine in any of these cases. The treatment, in brief, is one-half drachm of sodium bicarbonate and 1 drachm of magnesium magma every hour and after vomiting until the bowels move freely. To this is added an enema of 2 ounces of sodium bicarbonate in 12 ounces of warm water every four hours until the urine turns alkaline; the treatment is continued by mouth until a 10 per cent. solution of ferric chloride in the hands of the nurse does not show any mahogany-coloured precipitate in the urine. The diet is skimmed milk, orange juice and custards. Whisky seems to relieve the gastric spasms. When vomiting is incessant, dextrose, in the proportion of a teaspoonful to a cup of water, is mixed with the sodium bicarbonate enema.

Piperidine Derivatives as New Local Anæsthetics.—S. M. McElvain ("Journal of the American Chemical Society," August, p. 2179 and p. 2239) has prepared a series of piperidine derivatives, the pharmacological properties of which have been tested by R. E. Jones. Extraordinary anæsthetic efficiencies were obtained with 2 per cent. solutions of 1-alkyl-3-carbethoxy-4-piperidyl benzoates of type



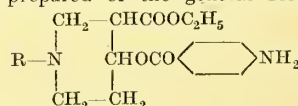
where R is the alkyl group indicated in the following table:—

Pharmacological Results with Salts of 1-alkyl-3-carbethoxy-4-piperidyl benzoates

Alkyl group	Salt used	M.P. °C	Duration of anaesthesia minutes	Toxicity (mgm per kilo)	
				Maximum tolerated	Minimum lethal
Methyl ..	HCl	181-183	8	50	100
Ethyl ..	HCl	214-216	*	100	150
n-propyl ..	HCl	208-210	16	200	250
iso-propyl ..	HBr	161-162	15	120	150
n-butyl ..	HCl	175-177	29	1,500	1,600
n-butyl ..	HBr	194-196	33	1,100	1,200
iso-butyl ..	HCl	197-199	13	2,400	2,500
sec-butyl ..	HBr	162-164	14	450	500
n-amyl ..	HCl	164-166	46	3,000	4,000
iso-amyl ..	HCl	179-181	40	4,000	4,500
Cocaine ..	HCl	—	29	100	150
Procaine	HCl	—	*	800	900

* No complete anaesthesia.

The striking feature is the marked decrease in toxicity with the size of the alkyl group attached to nitrogen. The increase in anæsthetic action would be predicted, but the toxicity deviates widely from previous experience of physiological action. The amyl derivative has an anæsthetic power considerably greater than cocaine, with one-thirtieth of its toxicity. The solutions of the new anæsthetic salts were acid to litmus, which acidity cause hyperaemia and marked irritation. As attempts to neutralise sodium hydroxide resulted in precipitation of free base a series of substances free from objectionable acidity were prepared of the general formula



These 1-alkyl-3-carbethoxy-4-piperidyl *p*-amino-benzoates also showed increase in anæsthetic action, and a decrease

The Progress of Pharmacy and Allied Sciences

in toxicity as the size of the alkyl group in the 1-position increases. They show decidedly greater duration of anaesthesia than the corresponding benzoates (*see above*), but their toxicity may be as much as ten times greater. Thus *iso*-amyl-3-carbethoxy-4-piperidyl-*p*-amino-benzoate has two and a-half times the anaesthetic power of cocaine, and only one-fourth of its toxicity.

PHOTOGRAPHY

Colour Sensitisers.—It is stated in "Science et Industries Photographiques" (July 1926) that, according to E. Calzavara the sensitisers in general use are mixtures of numerous isomers of unequal efficacy, and that he has prepared, in a state of great purity, the essential active element of each. These products, under the names of erythrochrome, chlorochrome, and olochrome, correspond respectively to pinacyanol, pinaverdol, and pinaflavol.

A New Amidol Developer.—L. Lobel and L.-J. Bunel ("Bulletin de la Société Française," May 1926) find that a mixture of diamidophenol and paraphenylenediamine acts as a developer of normal rapidity in a bisulphite solution. The formula they recommend is as follows:—

Diamidophenol hydrochloride ...	...	...	5 gm.
Paraphenylenediamine (base) ...	...	...	13 gm.
Sodium bisulphite (35° B.) ...	...	...	75 gm.
Water to make ...	...	...	1,000 c.c.

Sodium bisulphite 35° B. contains 34.7 gm. NaHSO₃ per litre. Whereas the diamidophenol alone gives solutions which are quickly oxidised, the paraphenylenediamine considerably diminishes the rapidity of this action, the developer becomes, in fact, relatively stable on exposure to the air. The developer is far more susceptible to the restraining action of bromide than one prepared according to the usual amidol formula.

Warm-tone Development of Chloro-bromide Papers.—R. J. Garnot ("British Journal of Photography," August 13, 1926) gives the following formulas for obtaining respectively sepia and more pronounced warm, such as red chalk, tones by development of chloro-bromide papers:—

I		II	
Hydroquinone ..	90 gr.	Hydroquinone ..	45 gr.
Sodium sulphite, anhydrous ..	310 gr.	Sodium sulphite, anhydrous ..	220 gr.
Ammonia, s.g. 0.924 ..	½ oz.	Ammonia, s.g. 0.924 ..	3 dr.
Ammonium bromide ..	90-180 gr.	Ammonium carbonate ..	90 gr.
Water, boiled and cooled ..	20-40 oz.	Potass. bromide ..	45 gr.
		Ammonium bromide ..	22 gr.
		Water, boiled and cooled ..	20 oz.

At the normal temperature the time of development is not more than from one to two minutes, according to the character of the negative, provided that exposure has been correct or nearly so. In order to obtain good colour in the final print the final image should come up of clear yellow colour. It is only on drying that the print obtains its final colour. Prints which appear reddish during development obtain an unpleasant tone on drying. The prints lose a little vigour in the fixing bath, and this must be allowed for in the development. Both the developing solutions may be kept for several months without undergoing any change if stored in full bottles with rubber stoppers or with a luting of paraffin wax.

A Local Reducer.—T. H. Greenall ("British Journal of Photography," July 9, 1926) finds that thiocarbamide is an efficient substitute for cyanide in the well-known reducer for bromide prints. Two stock solutions are prepared as follows:—

A		B	
Iodine ...	gr. xx.	Thiocarbamide ...	gr. xl.
Methylated spirit ...	1 oz.	Water (cold) ...	1 oz.

For use, mix 10 minims of A with 10 minims of B. For delicate work this should be diluted with an equal

volume of methylated spirit. The print, which must be in the dry condition, is pinned to a board, and the solution applied to the spot to be reduced with a sable, or camel-hair pencil, of suitable size, just moistened with reducer. In the other hand is held a somewhat larger brush, charged with methylated spirit, which must instantly follow the reducer on the print without waiting for the action of the reducer to show. The methylated spirit is then wiped off (glossy prints must be blotted, and not wiped), and the print is ready for further treatment with reducer, followed by spirit as before, and this is repeated until exactly the desired effect is obtained. The strength of the reducer must, of course, be adjusted more or less to the degree of reduction required. After treatment the print is placed, without previous washing, in hypo for a few minutes and then washed in the usual way. Iodine and thiocarbamide in watery solution may be used. The mixture acts with great regularity without undue preference for the lighter tones, but is somewhat slower than iodine and cyanide of an equal strength. A mixture containing 8 grains of iodine and 16 grains of thiocarbamide in one ounce of water is suitable for general use, and may be used repeatedly.

Recovery of Silver.—J. I. Crabtree and J. F. Ross (Communication 280, Eastman Kodak Research Laboratory), who have made an exhaustive study of the recovery of silver from fixing baths, consider precipitation with sodium sulphide is the most economical method. Precipitation with zinc dust, although not as rapid, is efficient, and does not evolve objectionable fumes. Since the hydrogen sulphide affects photographic materials operations should not be carried out in the vicinity of them. This trouble can be overcome by making the bath alkaline with caustic soda before adding the sodium sulphide. Small quantities of sludge may be dried by exposing to the air in flat trays. Moderately dry sludge may be mixed with sawdust for conveyance. The cost of recovery of silver by means of sodium hydrosulphite or its derivatives is too great to justify its use in preference to the zinc and sulphide methods. Although it has been recommended that electrolytic units should be placed in the fixing bath while it is in use, whereby the fixing life of the bath is prolonged by virtue of continual removal of silver, this procedure is not of commercial importance. The hypo bath is somewhat revived by the removal of silver by the units, but it is not rejuvenated to such an extent that its properties approach those of a fresh bath. The units cause bad sludge formation if they are placed in a working acid fixing bath unless the bath is well loaded with silver, and even in this case an appreciable quantity of sludge will form. The value of the electrolytic units lies in their use as silver recovery media, that is, for depositing silver from discarded fixing baths. For treating moderate quantities of solution the units are very efficient and require a minimum of labour, since the operations of precipitation, filtration, or decantation and drying of sludge are unnecessary.

VETERINARY MEDICINE

Johnes Disease.—J. B. Tutt ("Veterinary Record," August 21), states that he has had considerable success in the treatment of this disease by intravenous injection of half per cent. solution of formalin given at intervals of five to seven days. Care must be taken that none of the formalin is allowed to escape outside the vein. A case which was considered "too far advanced" is being treated with eighty minims of formalin in a pint of boiled water, as above, every other day, and showing "every symptom of rapid recovery."

Pyorrhoea in Dog and Cat.—According to H. Gray, in a paper read at the recent annual congress of the National Veterinary Medical Association, the usual practice of treating this complaint in dogs and cats is to scale and clean the firmly-implanted teeth and to extract the loosened ones. This is generally followed up by applying, after more or less long intervals, a mouth-wash composed

The Progress of Pharmacy and Allied Sciences

of a chlorinated solution, dilute hydrochloric acid, peroxide of hydrogen, or permanganate of potassium solution. If such treatment were carried out regularly it would have some check on the progress of the malady. But the only satisfactory way to arrest it before it has gone too far is to feed the animal on coarse crunching, breaking or tearing food which will keep the teeth clean, harden the gum and underlying alveolar processes and increase the nutrition of the jaw and also of the whole alimentary system. Vaccination, violet rays and radium or X-ray therapy are not practicable in veterinary practice.

Treatment of Ankylostomiasis.—Lieut.-Colonel Lane, I.M.S. ("Lancet," II, 1926, p. 346), in discussing the various drugs used in the treatment of this disease, concludes that carbon tetrachloride, in advised doses, does not occupy the premier position which is claimed for it; nor for analogous reasons is beta-naphthol a drug which can be recommended. Thymol, and oil of chenopodium of known ascaridol content, used in respective dosage of 4 gm. and 1.2 c.c., are safe drugs, the latter being, apparently, the more effective where *A. duodenale* is concerned. The choice between the two will mainly be determined by secondary considerations, such as palatability and, under mass conditions, ease and cost of administration. Medicinal iron is of little or no value in the persistent presence of hookworms. After their expulsion it will be used as in any other anaemia whose cause has been removed, and there is evidence that arsenic may aid the bone-marrow in the formation of haemoglobin. The solution of the immense and important problem of eradicating ankylostome infestation, so far as it depends upon mass treatment, can only be effected by the discovery of some drug more specific in its toxicity to hookworms than any now known. The search for such a drug, checked step by step by adequate controls, is one of the most urgent matters for those who are concerned for the health of several hundreds of millions of the more humble dwellers in the tropics.

Treatment of Liver Fluke.—R. F. Montgomery ("Journal of Comparative Pathology and Therapeutics," June 1926) describes some tests which have been carried out in the treatment of liver rot of sheep by carbon tetrachloride and tetrachlorethylene. Experiments with 172 sheep treated with pure carbon tetrachloride indicate that the drug has a reliable anthelmintic action towards mature liver fluke, but the dose did not destroy immature flukes infesting certain of the subjects at the time of treatment. A single administration of 1 c.c. in soft gelatin capsule was the dose for sheep weighing up to 140 lb. Starving for a period did not influence the efficiency of the dose. Doses as large as 50 c.c. given in capsule without breakage were perfectly tolerated by Welsh mountain ewes. The liberation of the contents of a capsule containing 5 c.c. produced obvious but not alarming symptoms, 30 c.c. gave rise to grave but not fatal effects. It is suggested that pure carbon tetrachloride may be recommended as an eminently safe drug for liver rot of sheep. Experiments with commercial carbon tetrachloride show that it cannot be relied on as is the case with the pure drug. It was found that tetrachlorethylene does not possess an anthelmintic action towards the common liver fluke comparable with that of carbon tetrachloride. The small series of experiments do not justify the conclusion that the drug is of no value, but the results do not encourage further investigation.

Miscellaneous Anthelmintic Investigations.—M. C. Hall and M. Wigdor ("Journal of the American Veterinary Medical Association," 1926, 22, No. 2) describe the results of experiments carried out in 1917 and 1918, hitherto unpublished, and there are references to subsequent work by other investigators. The first group of anthelmintics tested was the hydrocarbons and related compounds. It was found that terebene, xylene, toluene and spruce turpentine have some ascaricidal value, though not sufficiently marked to make them useful in competition with chenopodium and santonin. Terpeneol, cineol, eucalyptus oil, limonene and kerosene have practically no value for this purpose. An attempt to corre-

late the moderate efficacy of the first group and the lack of efficacy of the second group with their chemical composition was unsuccessful. The tests on tapeworm remedies indicate that kamala and male fern are fairly dependable drugs, though fluid extract of kamala appears undesirable. Freshly powdered areca nut did not give dependable results, and when the drug had been ground a long time it showed little efficacy. Arecolin hydrobromide is convenient but not dependable. Pelletierine tannate appears to be quite undependable. Chenopodium, in doses of 0.1 c.c. per kilogram of weight of dog, was practically 100 per cent. effective against ascarids, but of no value for hookworms or tapeworms. Other substances tested included latex of the fig, pyrethrum, betanaphthol, carbon disulphide, chloreton, Fowler's solution, barium sulphate, mineral oil and cresols. Of these, the only ones of value as anthelmintics are chloreton, Fowler's solution and cresols. The first named, on theoretical grounds, should be tested further, while the others cannot be recommended.

Insurance Act Dispensing

Record of matters concerning Chemists' interests in the
National Health Insurance Acts

ENGLAND AND WALES

Local Reports

London.—A meeting of the London Pharmaceutical Committee took place on September 21, Mr. J. Milner (chairman) presiding. At the outset, the chairman made sympathetic reference to the death of Mr. A. R. Keith, and in moving a vote of condolence paid a tribute to Mr. Keith's untiring zeal in all pharmaceutical affairs. A vote of condolence and sympathy with the widow was then passed. The reports of the Central Checking Bureau for the months of April and May 1926 showed a margin of error in pricing of 0.07 per cent. and 0.02 per cent. respectively. The secretary reported, *inter alia*:—That the offices of the London Panel Committee had been transferred to 17/18 Russell Square, W.C.1. Chemists requiring copies of the L.I.P. must now make application to the new address. Particulars of two complaints regarding the dispensing service and the action taken in each case, which proved satisfactory. The Committee confirmed the action of the secretary. On the new paragraph in the Tariff, page 31, headed "Ambiguous Quantities." The Committee instructed the secretary to go into the matter with regard to gauzes in original sealed packages. Particulars of comparative figures—totals for the second quarter, 1925 and 1926, as follows:—

	1925	1926
Number of prescriptions	1,609,607	1,848,472
Cost of ingredients ...	£24,475 19s. 5d.	£29,133 8s. 6d.
Cost of dispensing fees ...	£29,940 15s. 3d.	£34,338 4s. 10d.
Av. ingredient cost ...	3.65d.	3.78d.
Av. dispensing fee cost ...	4.46d.	4.46d.

Particulars relating to the supply of insulin, vaccines, hypodermic syringes and needles for the second quarter, 1926, as follows:—

	No. of Prescriptions	Total Cost	No. of Patients
Insulin ...	2,143	£714 7s. 11d.	712
Vaccines ...	224	£78 15s. 2d.	175
Hypodermic syringes	36	£5 8s. 0d.	36
" needles	149	£5 19s. 6d.	—

Information regarding the Departmental Committee on the Poisons and Pharmacy Acts, and pointing out that anyone wishing to give evidence before the Committee should communicate with Mr. M. D. Perrins (joint secretary), Home Office, Whitehall, S.W. The secretary's report was then adopted. The representatives of the Pharmaceutical Service Subcommittee reported on five cases under the testing scheme. No action was taken in one case, while in the remaining four cases, two were censured and two were cautioned. It was also reported that in two cases which were reviewed by the Minister of Health the chemists were surcharged £1 each.

Personalities

MR. CLIFFORD BALL, Mus.Bac., carillonneur to the Bournville Village Trust, has obtained a diploma with honours at the National School of Carillon-playing, Malines, Belgium.

UNDER the title "Sandiacre Notabilities," the "Stapleford and Sandiacre News," September 17, published a portrait and biography of Mr. Herbert Jackson, chemist and druggist.

THE following have been appointed members of the Advisory Council to the Committee of the Privy Council for Scientific and Industrial Research in the place of members who have retired: Professor V. H. Blackman, F.R.S., Professor F. G. Donnan, C.B.E., F.R.S., and Professor F. A. Lindemann, F.R.S.

ALDERMAN DR. G. CLARIDGE DRUCE has recently returned from a holiday on the Continent. He has been exploring the Dauphiné and the Hautes-Alpes, staying at Grenoble, La Lauteret, and the Col Galibier, where, owing to the retarded season, the alpine flowers were in great beauty and variety. He also visited the Grande Chartreuse and Chamonix, reaching the latter by an interesting pass from St. Jean de Maurienne. Thence he went to Geneva to pay his compliments for the recently granted honour from the Scientific Society of that city, being received at the University by Dr. Beauverd. Dr. Druce then went to Paris, whence he travelled by aeroplane to Croydon.

FOLLOWING the marriage announced elsewhere in this issue between Mr. W. E. F. Ward and Miss S. G. Vallance, a reception was held at Beech Mount. Unfortunately, the wedding presents, numbering 170, were not on view, as they had already been packed for despatch to Accra, West Africa, for which port the bride and bridegroom sailed after a short honeymoon in the lake district. Mr. Ward is on the staff of the Prince of Wales' College, Achimota, Gold Coast Colony, where he has been since the foundation of the college two years ago. Mrs. Ward has been both a pupil and a teacher in the Matthay School of Music, Manchester, and holds L.R.A.M. certificates for both pianoforte and singing.



Photo] [Fielding, Leeds.
MR. J. L. BARNETT

At a conference of representatives of Jules Lang & Son, Charlton Place, Islington, London, N.1, on August 8, Mr. F. Lang presented to Mr. Jack L. Barnett a gold wristlet watch, suitably inscribed, to commemorate the completion of twenty-one years' service with the firm. Mr. Barnett is well known to the trade in the provinces, his ground extending from Birmingham to Aberdeen. He is a native of Glasgow, and lives at Leeds.

Marriages

ALLEN—CROWE.—At St. John's Church, Pendlebury, Manchester, on September 11, John Kewley Allen, chemist and druggist, to Winifred Crowe.

FORSTER—LLOYD.—At Dawdon Parish Church, on September 15, Thomas William Forster, Ph.C., Sunderland Technical College, to L. A. Lloyd.

WARD—VALLANCE.—At Monton Church, near Manchester, on September 11, by the Rev. C. M. Wright, M.A., and the Rev. N. Anderton, B.A., William Ernest Frank, eldest son of Mr. W. H. Ward, of Battersea, London, to Sylvia Grace, only daughter of Mr. A. C. Vallance, Ph.C. (director, James Woolley, Sons & Co., Ltd.), Beech Mount, Eccles. (See above.)

Deaths

BUCKLEY.—At 108 High Street, Lees, Oldham, on September 11, Mr. William Buckley, chemist and druggist, aged sixty-three. Mr. Buckley had been in business at Lees for over forty-one years. He served for a time on the old Local Government Board, and was a member of the Unity Lodge of Freemasons, Oldham. He leaves a widow, one daughter and four sons, one of whom is in Japan and another in New Zealand.

HARRISON.—Recently, Mr. William Harrison, Ph.C., Yorkersgate, Malton. Mr. Harrison passed the Qualifying examination in 1880.

JONES.—At Llangollen, on September 20, Mr. Humphrey Jones, Ph.C., aged ninety-three. Apprenticed in Chester, Mr. Jones commenced business in Llangollen in 1859, and of late has been assisted by his two sons. He was a magistrate for Denbighshire and had been chairman of the local council.

ROBERTS.—At Bristol, on September 10, Mr. Weston Roberts, chemist and druggist, aged sixty-four.

STEVENSON.—On September 8, Willie, only son of Mr. W. J. Stevenson, Ph.C., Belfast Union Dispensary, and secretary of the Ulster Retail Drug Trade Association, aged ten. The boy, who had recently won an entrance scholarship into the Methodist College, Belfast, was run over by a motor-lorry.

Wills

LIEUT. GEN. SIR WILLIAM BOOG LEISHMAN, Wyberton, Park Hill Road, Croydon, Director-General of the Army Medical Service, who died on June 2, left £7,898 3s. 10d., with net personality £7,709 4s. 4d. The will is proved by Dame Maud Elizabeth Leishman, the widow, the Rev. J. F. Leishman, Joan Leishman (sister), and Lieut.-Col. F. E. Gunter.

MR. THOMAS EDMONDSON, chemist and druggist, Barco, and carrying on business at 67 Cornmarket, Penrith, who died on July 23, left £39,853 13s. 8d., with net personality £33,086 3s. 10d. Probate is granted to Mrs. Mary Edmondson, the widow, and Tom Scott. He gives £2,000 and the household furniture to his wife, £200 to Tom Scott, £200 each to his servants, Moses John Doyle and Jane Ann Little, if still in his service, and the residue to his wife for life or widowhood, and then between his children.

MR. JAMES GIBSON, chemist and druggist, 16 Windsor Gardens, North Shields, who died on June 23, left estate of the gross value of £5,314 0s. 5d., with net personality £4,509 16s. 3d. Probate has been granted to his widow, Mrs. Mary Annie Gibson, and his sons, Mr. A. F. Gibson, and Mr. R. Gibson. The testator left all of his property upon trust for his wife for life, with remainder equally between his three children, Albert, Rowland and Edith.

MR. FREDERICK CHARLES LUTHER WRATTEN, Hellingley, Dingwall Avenue, Croydon, of Wratten & Wainwright, photographic plate manufacturer, who died on April 8, left estate of the gross value of £52,007 3s. 9d., with net personality £19,437 4s. 2d. Probate has been granted to his son, Mr. Sidney Herbert Wratten, and Mr. Frederick Tummons Bechely. The testator left £50 to Mrs. Maynard, widow of his late foreman; £25 to "my excellent and devoted servant," Daisy Sacre; £250 to Thomas James Wainwright, son of his late partner; £150 to Mrs. Ada Nicol, sister of his late partner; annuities of £52 each to Mary Gillham and Lucy Davis, sisters of his late partner; an annuity of £91 to his sister-in-law, Mrs. Charles Taylor; of £52 to his sister-in-law, Mrs. Florence Smart; and of £40 to his niece, Clara White. To his wife he left £250 and his household and personal effects, and he left cash in house or at bank equally between his wife and his son Sidney Herbert. Subject to several smaller bequests, he left the residue of his property as to one-third each to his wife and his said son and one-third for the benefit of the widow and children of his late son, Edmund Livingston Wratten.

Trade Notes

EDME, LTD., Broad Street House, London, E.C.2, invite applications for particulars of the Edme extract of malt with cod-liver oil.

WALDO BOTTLE-CAPS.—Bruce, Dawson & Co., 70 Finsbury Pavement, London, E.C.2, offer the Waldo self-fixing bottle-caps, of which they have a large stock ready for delivery.

WIGGLESWORTH, LTD., Westhoughton, Lancs, are making Coltsfoot cough candy a special line for winter trade. Samples and terms of supply will be sent on receipt of a postcard.

GEE'S LOBELLINE, the cough cure made by Squire & Co. (Birmingham), Ltd., is to be the subject of a large advertising campaign to the public. The advertisements will commence next week.

PHARMACEUTICAL ADVERTISING.—W. B. Cartwright, Ltd., Rawdon, near Leeds, have sent us a selection of

their newer showcards and counter showcases referring to their various packed goods. The feature of the showcards is the subdued colourings, which has the effect of conveying the idea of quality. The one illustrated is typical, but each packed article has a suitable illustration; the card for Nupines, for instance, has a very effective scene of a foggy evening outside a lecture hall. The counter showcases are ingeniously designed "outers," with lids that fold so as to give the effect of cut-out showcards. The colouring and lettering is distinct, the letterpress being

concisely expressed. We understand that these are produced in the company's own printing works, these facilities, combined with the advertising department, enabling Messrs. Cartwright to supply an almost inexhaustible number of designs.

JAPANESE DRUGS.—The Japan Menthol Manufacturing Co., Ltd., Box No. 43, Osaka, Japan, invite applications for samples and particulars of Japanese drugs. These include peppermint oil, crystal menthol ("J.M." brand) and pyrethrum.

MOTOR LUBRICANTS.—The Dee Oil Co., Ltd., D 23 and 24 Exchange Buildings, Liverpool, are prepared to quote for motor lubricating oils of their own manufacture. A table is published giving the variety suited for the lubricating system of different cars.

DARWIN RAZOR BLADES.—Darwins, Ltd., Fitzwilliam Works, Sheffield, announce a new scheme for largely increasing the sale of Darwin safety razor blades. The blades are obtainable through wholesalers, and as the advertisement states, "Wisdom suggests laying in larger stocks in advance."

EVANS' THROAT PASTILLES.—Evans Sons Lescher & Webb, Ltd., Liverpool and London, announce a reduction in price of Evans' throat pastilles. From October 1 the retail price will be 1s. per package. Stocks on hand of the old packing will be exchanged *pro rata* if returned direct to the manufacturers.

PHILIPS ELECTRIC LAMP.—Philips Lamps, Ltd., 145 Charing Cross Road, London, W.C.2, issue an illustrated folder which gives particulars of the chief types

of electric lamps which the company manufacture. Users of lamps can obtain from this a clear idea as to the most suitable lamp for any particular purpose.

MYSTYL is the name of a new synthetic perfume otto produced by H. E. Stevenson & Co., 122 Great Suffolk Street, London, S.E.1. It is a heavy perfume of the oriental type, and besides its employment as a perfume ingredient, it can be employed as a fixative in the proportion of one in 200. We find the odour very pleasant and lasting. It is best appreciated in dilute solution.

HOWARDS' ASPIRIN TABLETS.—Howards & Sons, Ltd., Ilford, announce in this issue a new bonus scheme of interest to the trade. During October Howards' aspirin tablets will carry a special autumn bonus of forty-eight 10d. bottles free with each order for two gross of bottles of twenty-five, provided a window-show is made. The scheme is further explained in the company's advertisement. The retail prices are protected under the scheme of the Proprietary Articles Trade Association.

Coming Events

This section is reserved for advance notices of meetings or other events. These should be received by Wednesday of the week before the meetings, etc., occur.

Monday, September 27

Pharmaceutical Society of Great Britain (Manchester and Salford Branch, Junior Section), Council Chamber, Houldsworth Hall, Deansgate, at 8.30 p.m. "Window Dressing and Advertising," by Messrs. J. Cleworth and R. G. Edwards.

Tuesday, September 28

South-West London Chemists' Association, Stevens' Bijou Hall, Bromell's Road, Clapham, S.W.4, at 8.30 p.m. Conjoint meeting with branch of Retail Pharmacists' Union. Mr. A. R. Melhuish (member of Council) on "N.H.I. Terms, Problems and Difficulties."

LONDON (WESTERN) PHARMACISTS' ASSOCIATION.—The annual reunion, supper and whist drive will be held at Slaters' Restaurant, 192 Oxford Street, W., on October 7, at 7 p.m. Tickets (6s. each) from Mr. W. B. Falding and members of the Committee.

PHARMACEUTICAL SOCIETY OF GREAT BRITAIN.—The opening of the 85th session of the School of Pharmacy will take place on October 6 at 3 p.m. Inaugural address by Dr. J. F. Tocher, F.I.C., Ph.C. (University of Aberdeen).

Business Changes

ROWSE'S PHARMACY (E. M. Rowse & Co., Ltd.) have opened a business at 83 Edgware Road, London, W.

ON and after September 27 the address of the Retail Pharmacists' Union will be 4 and 5 Queen Square, London, W.C.1.

MR. R. G. LAYBOURN, chemist and druggist, 39 High Street, Margate, has disposed of the lease of his premises, the stock and fittings being sold by auction.

The business carried on at 11 John Penn Street, Lewisham, London, S.E.13, by Mr. J. Milner, M.P.S., as Milners' Manufacturing Chemists, and the Greenwich Lemonade Co., and by Mr. S. R. Coke under his own name, have now been amalgamated, and will be carried on in future as a private limited company under the name of Milner & Coke, Ltd., Manufacturing Chemists. The sole directors are Mr. J. Milner, M.P.S., and Mr. S. R. Coke.

Information Department

INFORMATION WANTED

Postal or telephone information with respect to makers or first-hand suppliers of the undermentioned articles will be appreciated:

B/109. Lyseptal	F/219. "Secalysape" (German preparation)
S/229. Morton's iodised salts	M/229. Water bags (William Wand) for cold water
M/199. Mitilax (O.P.)	D/179. White tulip soap
R/139. Neosan quinine series	
A/189. Thalaspi	

Observations and Reflections

By Krayser III

Service in Business

means much more than doing something for nothing, and I was glad to note the remarks of one of your contributors on this subject (*C. & D.*, September 18, p. 486). There may, of course, be times when the service rendered can bring no immediate profit from a business point of view; but the best service a chemist can render his customers is to do what they want him to do promptly, expeditiously and satisfactorily. If the service thus rendered is all that a customer desires, there will be every prospect of the customer returning in due course and of recommending others to come to the same pharmacy. The essential idea underlying the giving of special service in business is to attract customers and ensure their return and recommendation, while also directing profits into the till.

If Direct Supervision

of the dispensing of medicines means that the proprietor of a business, or some other duly qualified person, must witness everything that is done by a dispenser not legally qualified, your correspondent "Checker" (*C. & D.*, September 18, p. 492) is probably safe in assuming that there is no pharmacy in the country where the words are so interpreted. It is, however, a moot point if this literal interpretation was not intended, and it would not greatly surprise me to find such an interpretation being enforced one of these days. The ideal plan would be to have all dispensing of medicines restricted to pharmacists, both in shops and elsewhere, but such a ruling applied to Insurance dispensing would naturally raise in an acute form the question of remuneration, as existing terms would certainly not be remunerative on such a basis.

Questions Asked

by "Storage" (*C. & D.*, September 18, p. 492) are not easy for an unofficial writer to answer. I think, however, it is not unsafe to assume that the Pharmaceutical Society (or its Council) has not in any way been responsible for the framing of the Dangerous Drugs Regulations, and that it had no voice in defining the scope of the Privy Council's inquiry. This much would appear certain, so far as one can judge from the information on the subject which has been published. When I suggested possible important changes in respect of the keeping, sale and dispensing of poisons, I had in mind the tendency of Government inspectors to regard existing regulations as being too elastic. They would have us handle all poisons in accordance with one fixed, unalterable rule, so that they may be caused no more trouble when on a tour of inspection than an Excise officer experiences when he calls to look at our Spirits Register. In fact, what the Pharmaceutical Council has to do now is to fight against the disposition to convert pharmacists into mere parts of a recording machine.

Mr. Keith's Death

appears to have been a matter of widespread regret in metropolitan pharmaceutical circles, all but one of the London associations being included in your long list (*C. & D.*, September 18, p. 480) of bodies which were officially represented at the funeral, while all the national organisations joined in expressing sympathy at the loss of the veteran pharmacist whom so many regarded as a personal friend. Now that he has gone, there will be vacancies to fill on several executive bodies, including the Pharmaceutical Council. It is to be hoped that Mr. Keith's successor in this particular instance will be a man able to take the long view which is required by existing circumstances. Co-option has its advantages when the person selected to fill a casual vacancy possesses the special qualities required to help in solving a difficult problem, such as that presented by the operations of the Departmental Committee now in being. Let us hope that the right man will be available, and that the Council will do the right thing by co-opting him.

Whether the Many Discoveries

made by the Jesuit fathers in the seventeenth century have ever been tabulated I do not know, but the scattered references to the industry and exploratory zeal of them are so frequent as to arouse intense admiration for their disinterested labours. Your note on ginseng is a case in illustration of their self-denying work. It was about the end of the seventeenth century that Father Jartoux, a Jesuit missionary, wrote his account of this extraordinary drug. It was known among the Chinese by names meaning "the pure Spirit of the Earth," "the Plant that gives Immortality," and others equally extravagant. That it was considered by Europeans, who first made its acquaintance, to be a species of mandrake is not remarkable when its bifurcated shape is seen to resemble so closely the lower limbs of mankind. There cannot be much doubt that the form of the root accounts for the widespread belief in its miraculous virtues, for no plant could be endowed with such a figure unless it was also endowed with powers beneficent to mankind. In China ginseng or nisi or ninzin was a most costly drug, and was the sovereign specific for all weaknesses of body and of mind. Its reputation seems to have arrived in this country before any supplies were available, but this did not deter the editors of the 1721 edition of the *Pharmacopœia Londinensis* from including it in their "Catalogue of Simples."

The Letter of Father Jartoux,

in which he expressed his belief that the ginseng plant might be found in Canada, prompted another member of the Society, Father Lafitau, to seek in that country for this wonderful plant. He was successful in finding a similar one, which, after much discussion in Paris as to its identity, or otherwise, with its prototype, was subsequently accepted as an allied plant. This is the *Panax quinquefolium*. Lafitau's pamphlet describing it was published in Paris in 1718 with this title, "Mémoire concernant la précieuse plante du Gin-Seng de Tartarie decouverte en Canada." Although ginseng was omitted from the *Pharmacopœia* of 1746, it was restored to the "Materia Medica" of the 1788 edition with the botanical name of *Panax quinquefolium*, under which name it appeared in the "Species Plantarum" of Linnæus. The importation of the American drug into China began quite early in the eighteenth century, and the practice seems to have become common by the middle of the century. Mr. Wilson, to whose paper you refer in the Commercial Compendium, took much trouble in acquiring his information and specimens. At the conclusion of the paper he expresses his indebtedness to the Jesuit missionaries for their generous assistance, and pays a tribute to their zeal in the prosecution of their studies as to the natural resources of the Chinese Empire.

The Disguises

in which opium has masqueraded from time to time have been many, but none has been more famous than the Electuarium Diascordium, which poses as a preparation of scordium (*Teucrium scordium*—the water germander), but is, in all its variations, a preparation of opium. The name Diascordium seems emblematic of pharmacy; it exhales an air which at once bathes one in pharmaceutical lore. The preparation was, as you say, the invention of an Italian, Jerome Frascatorius, who lived in the fifteenth and sixteenth centuries. He was more famous for his poetry than for his medical achievements. It is rarely that a more modest man is met with, for he attended the sick without payment, and his Latin poems, which obtained the applause of the best judges of such literary work, would have remained unpublished but for the action of his friends. The Diascordium is no longer an article in current use, but another bequest of Frascatorius is unfortunately too often under the notice of the medical and pharmaceutical professions. It is to him that we owe the name syphilis, which he devised as the name of a fictive hero of one of his poems, "Syphillides, sive Morbi Gallici."

*Aromatic &
Synthetic
Chemicals
Essential Oils, &c.*

ENQUIRIES INVITED BY
THE MANUFACTURERS—

A. BOAKE, ROBERTS & CO. Ltd.
STRATFORD, LONDON, E.15

Telegrams: "Boake, Strat, London."
Telephone: Maryland 1050 (6 lines).



"DARTRING" THE ORIGINAL
& PREPARATIONS.
Tubes 7/6, 15/- Doz.
less 32 1/2 %.

TRADE MARK ALL WHOLESALEERS. Phone: Royal 7430
Edward Cowen & Co., 14 AMERICA SQ., MINORIES,
LONDON, E.C.3.

CARAMEL
Estab. 1880 (SACCH. UST.)
L. Lambert & Co. Ltd. 4, PERCY ST.,
LONDON, W.1.

VETERINARY COUNTER PRACTICE. Price 7s. 6d. net,
by post 8s.

DISEASES AND REMEDIES. Price 5s., by post 5s. 3d.

THE PHOTOGRAPHIC CHEMIST. Price 3s. 6d., by post
3s. 8d.

THE "CHEMIST AND DRUGGIST," 42 Cannon Street, E.C.4



**ROBINSON'S
of CHESTERFIELD**
for CARDBOARD BOXES
ROUND · OVAL · SQUARE · FOLDING
ROBINSON & SONS, LTD. • CHESTERFIELD & LONDON

'HOLADIN'

An Extract of the Entire Pancreas Gland.

Supplied in 3 gr. gelatine capsules, and issued
in bottles, containing 25 and 100.

Originated and Manufactured by

FAIRCHILD BROS. & FOSTER
NEW YORK and 65 HOLBORN VIADUCT, LONDON, E.C.1

Agents:—

BURROUGHS WELLCOME & CO., London, Sydney, Cape Town

"TRIKRESOL"

(Also MEDINAL, EUCAIN, &c.)

ARE

REGISTERED TRADE MARKS.

STOCKS IN LONDON.
PRICES ON APPLICATION.

3 Lloyd's
Avenue

Schering
LIMITED

London,
E.C.3.

EXTRA
RECTIFIED

**PERFUMERY
ALCOHOL**

Write for Prices.

J. BURROUGH, Ltd. 1 Cale Distillery,
LAMBETH, S.E.11

Editorial Articles

The Trend of Therapeutics—II

THE attitude of the psychologist to the working of the human senses is very different from that of the physical chemist. Physiological chemistry is concerned in tracking down one by one the tissue elements and the chemical substances which interact therewith to produce our bodily reactions and sensations, the objective being to interpret each action and reaction in terms of chemical or mechanical energy. Psychology investigates much more immaterial "complexes" that arise out of the combination of different sensations. In effect, this science connecting mind with matter recognises that mutually antagonistic interactions can by their varying intensity profoundly modify the consciousness of the individual, and not only influence his outlook, but alter even his personality by a drastic change in environment or education. Both sciences are essential to human progress, for though much may be explained by bodily analysis, the functioning of the different organs of animals depends upon the ordering of the phenomena which constitute living processes and sensations. Pharmaceutical elegance continues to exist owing to the likes and dislikes which heredity and idiosyncrasy have inflicted upon the human race, because appearance, odour, and taste control to a surprising extent human predilections and opinions. The first fact that emanates in any study of our sensory apparatus is its preference for mixed stimuli. For example, a "musical" note is not one definite frequency of sound pulsations, but a mixture of the fundamental frequency with its harmonics, whilst a melody is decidedly complex in its overtones, chords, timbre, etc. Likewise simple odours and tastes of pure chemical substances fail to satisfy the human nose or palate. Hence the art of the perfumer and pastrycook, who trade upon preferences which arise out of the complexity of our physiological processes, but the pharmacist by no means exploits these to a like extent as regards medicine. The tongue appears to possess four different types of taste-buds: bitter, sour, salt, and sweet. These are sensitive to chemical stimulation. For example, a weak solution of quinine bisulphate depresses all four taste sensations, whilst gymnemic acid abolishes sweet and bitter sensations temporarily. The somewhat difficult psychology of taste, such as smoking after coffee but not with sweets, becomes much more understandable when the effect of previous gustatory stimulation is taken into

account. For example, a 20 per cent. sugar solution enhances all taste effects, but a 5 per cent. solution depresses sweet, salt, and sour sensations, leaving bitter predominant. There is a decided similarity in response to stimuli as regards four senses. Sight reacts to flicker in colour, hearing to pulsation frequency of sound, touch to percussion frequency, and taste to interrupted electrical stimuli, and in each case it is a critical pulsation frequency that is recognised as determining a certain sensation, the intensity in turn depending upon the strength of the stimulus in question. The sense of smell differs in requiring chemical molecules to act as exciters of the olfactory nerves. It is evident that the psychologist's complex fits in with pharmacy as an art. Heredity has endowed human instinct with a repugnance to rancid fat, a distrust probably acquired as the result of experience with ptomaine poisoning caused by putrescent meat. Hence the revolt of the children against the distinctive odour of cod-liver oil is quite natural, and the object of vendors should be to eliminate its "fishy" taint. It is by no means certain that the odour and taste of cod-liver oil could not be greatly improved by extraction of freshly minced liver with volatile solvents. Undoubtedly the present process of steaming cod livers must cause decomposition of oil, apart from the unavoidable putrefaction of animal tissues. Rancidity is always connected with aldehydic substances, and the use of a solvent free from oxygen at low temperature might easily solve one problem in natural repugnance to cod-liver oil. The production of odourless linseed oil by solvent extraction proves that such an idea may not be a chimera. A second feature in medication with oils is the preference of the human palate for finely divided fatty substances. This, again, is a psychological reflex of a purely physical process; for oily taste results whenever the mucous secretions cannot wash away the oil film from its delicate absorbing surfaces. The minute globules in good emulsions, such as milk, can be dealt with effectively, or, in other words, an emulsion prevents living cells from being asphyxiated by drowning with oil. Accordingly emulsification is indicated as the correct mode of "advancing" the therapeutical applications of medicinal oils. In this respect the past fifty years has shown surprisingly little advance in the preparation of cod-liver oil emulsion comparable, say, with progress in manufacture of margarine. The use of cod-liver oil emulsion is now advised as routine by consultants on children's diseases, and we are credibly informed that over 50 per cent. of infants under one year old are already taking this oil as a prophylactic. Thus Dr. Helen Mackay, in addition to her remarks cited in our first article, stated that "a cod-liver oil emulsion begun gradually and given three times a day in the bottle is well tolerated by most infants." She also continued: "If every artificially-fed infant and every breast-fed infant that was little out of doors were given cod-liver oil throughout the winter it seems probable that all but the slightest manifestations of rickets would be banished, and the incidence of colds, bronchitis, otorrhoea and convulsions in infancy would be lessened." Evidently an important trend of therapeutics is towards cod-liver oil medication, but so far most of the benefit has accrued to proprietary preparations and not to the pharmacist. There is room for considerable improvement in present-day emulsions, their drawbacks including: (1) the presence of preservatives, such as salicylic acid; (2) the presence of oxidases in gummy emulsifiers; (3) oil content often below 33 per cent.; (4) oil globules of large size when tragacanth is used as thickening agent; or (5) variation in pourability if Irish moss jelly is used to increase viscosity. The hand-made egg emulsions of cod-liver oil in vogue twenty years ago were much more miscible than the modern (inseparable) machine-made product, which floats in warm milk and requires considerable shaking to ensure proper mixing in the baby's bottle, this being quite a problem in feeding on

a large scale in hospital wards. Greater miscibility and palatability are thus immediate desiderata in cod-liver oil therapy, which is fast becoming a routine addendum to modern infant feeding. It is somewhat surprising that control of ionic condition and the newer phases of producing interfacial surfaces in emulsions have not been studied more by pharmaceutical research workers. The effect of new combinations in cod-liver oil are well worth exploiting. Calcium and iodine are growth-promoting substances usually present in cod-liver oil emulsion, and these enter equally with vitamins into that complex of living chemistry constituting growth. Rickets is simply a sign that co-ordination has failed, but only experiment could decide wherein occurs a breakdown in calcium metabolism. This may be in colloidal calcium controlled by parathyroid gland, or thyroid defect through lack of iodine or other precursor of its thyroxin-yielding substance. Again, ordinary cholesterol cannot fulfil the rôle of an antirachitic substance until converted by ultra-violet light into vitamin D. Which of the many factors is leading to inco-ordination in metabolic processes is not apparent ordinarily in clinical diagnosis. In comparison the results obtained by supplying the missing growth factor in controlled experiments with animals causes such remarkable changes that the investigator in his enthusiasm is apt to overlook that his artificial conditions do not necessarily correspond to those met with in debilitated humanity. Furthermore, it is always necessary to be on guard against an unconscious preference, which enhances the effect of, say, the unknown (parathyroid) hormone as compared with the commoner chemical (calcium lactate), though either can conceivably cure the induced defect. This is an unbalanced aspect of psychology in medicine which causes new treatments to supplement older methods, not always to the advantage of the patient. Whatever the ultra-violet lamp can do, a simple dose of cod-liver oil will do equally well, but there are growth essentials in the oil that do not exist in light. Likewise fresh air, wholesome food and cleanliness are just as important as therapeutic treatment to ensure a rickety infant becoming strong and sturdy.

Blue Dyes for Alkaline Solutions

ONE of the difficulties that pharmacists and manufacturing chemists often encounter is to find a colouring matter for a preparation which will be fast to light and not be affected by alkaline ingredients. Examples are a blue dye for ammonia smelling salts and a suitable colour for alkaline arsenical weed-killer. In the latter case the Arsenic Act states that indigo is to be used, but in 1841 the use of alkaline solutions of arsenic as weed-killer had not been thought of. Indigo is quite unsuitable for the purpose, and manufacturers try to provide a blue colour to act as a warning of the poisonous nature of the solution. These attempts, however, are not always successful. We learn now from the technical department of the British Dyestuffs Corporation, Ltd., that the following dyes are suitable: Chlorazol sky blue F.F., alizarine Delphinol, B.D.N., and Disulphine blue V. According to laboratory tests the above are stable in a 20 per cent. solution of ammonia and in a 10 per cent. solution of caustic soda. Chlorazol sky blue F.F. turns a little redder on adding the alkaline solution, but does not change from this shade on standing.

AMERICAN DRUGGISTS' SYNDICATE.—A meeting was held recently at the offices of the American Druggists' Syndicate in New York, to consider the offer of Schulte, the tobacco corporation magnate of taking over the syndicate. Schulte proposed the absorbing of the drug organisation into his cigar business by guaranteeing dividends for the first ten years, aggregating \$6,000,000, for which he was to receive the stock at present in the treasury, amounting to 321,549 shares, or about one-third of the total capital stock. Opposition cropped up to the plan from Chicago and elsewhere, and it was eventually decided that the matter be settled definitely at a final meeting to be held later. The principal objection came from druggist-shareholders.

Chemists' Exhibition at Glasgow

THE popularity of chemists' exhibitions shows little sign of waning. Two have been cancelled this year already, owing to industrial troubles, which fact perhaps explains in part the popularity of the present exhibition. It is held in the St. Andrew's Hall, situated at Charing Cross, the business centre of Glasgow. The hall is a magnificent structure, internally and externally, and it would be difficult to house an exhibition of this sort in a more suitable building. The exhibition was opened at 12 o'clock precisely on September 20 by Mr. W. G. McNab, the chairman of the North British Branch Executive. Mr. A. A. Dick supported, and a vote of thanks to the opener was moved by Mr. T. Guthrie. On the platform were several well-known pharmacists—among them Messrs. Thomas Hardy, Arthur, McMillan, Duff, Ferguson, Abbott, Chapman and Black.

TOILET GOODS

The St. Andrew's Hall is alive with brilliant colour and seductive odours. Toilet articles would appear to predominate even more than ever. Some of the stands were unusually attractive, and much time had apparently been expended on their planning and dressing. The *Wortex Manufacturing Co., Ltd.*, have an attractive display of sprays, puff bowls and manicure sets. These form a delightful show with their bright colours and artistic designs. They range from all prices, and are of every conceivable design. Sprays and powder bowls are very much to the fore in this exhibition—many stands are showing nothing else. *A. Albeman* also has a prettily-arranged display of sprays, mirrors, perfumes, and brushware. They call special attention to the *Innox* beauty preparations—of which there is a wide range—and we were told that "these are the only preparations of the kind recommended by the medical profession." *T. F. Bristow & Co., Ltd.*, have a stall which deserves high praise—it is unusually beautiful and well arranged, and forms a striking feature of the exhibition. Aside from their well-known lines, they call particular attention to their Blue Lilac range of toilet goods—perfume, soaps, bath crystals, creams, powders, and so forth; and to Rose of England perfume, mimosa perfume and soap, olive cream soap, and to the Georgian range of perfumes, soaps, etc., to which reference has already been made in *THE CHEMIST AND DRUGGIST*. *Erasmic Co., Ltd.*, again have a magnificent stand. No expense or labour has been spared. Their well-known bubble-stand is on view. Bubbles are blown by machinery, and a vast "stock" of bubbles appears to support a metal figure. All the well-known lines are on view—too well known to need particularisation—as well as certain lines in new packing, such as talcum powder, compact powders, and shaving powder. *T. E. Chaila & Co.* specialise in a few high-class perfumes—for example, the *Corey* and the *Norby* perfumes, and beauty products. These are of the highest class, and are most attractively packed; the bottles themselves are of cut glass, in a variety of beautiful shapes, and are contained in novel fancy boxes. *Eugene Rimmel, Ltd.*, again have expended much thought and care in producing an elegant and striking display which suggests the excellence of their well-known lines. They are showing a new perfume called "Art Moderne," of very delicate fragrance and artistically packed. In addition, all the usual perfumes, soaps, etc., of this house are on view, and they are already familiar to our readers. *Rimmels* are putting on the market a range of perfumes at the low price of 2s. 9d. and upwards. *Gottlieb Taussig*, a Vienna firm, make a speciality of transparent soaps in bars and cakes, and by means of electric light arrangement the transparency of the soap is displayed. *Cockburn & Co., Ltd.*, are showing manicure sets, sponges, perfumes, and also packed drugs. *Bridgen & Griffen* are another firm which specialise in puff bowls, sprays and manicure sets. The brilliant colourings lend themselves to striking display, and of this fact the firm has taken full advantage. *Hussey, Dawson & Co.* are the only firm at the exhibition which

specialises in empty containers—mostly of aluminium—for compact powders, shaving sticks, tooth-soaps, and the like. They can supply compact powders in the containers if necessary, and their clientele are mainly wholesalers.

PACKED LINES

are well represented. *Harkness, Beaumont & Co., Ltd.*, specialise in packed malt and oil. They keep a variety of style of packing and labels, and one design can be reserved for any pharmacist in his own town. The same applies to emulsions of paraffin and of cod-liver oil. Other prominently displayed lines are vitamin malt and oil, agarised petroleum cream, packed oils, and also a variety of dog medicines, which have long been a speciality of this house. *Cuxson, Gerrard & Co., Ltd.*, have a show of packed goods too numerous, as well as too familiar, to call for details. They represent toilet goods of all sorts as well as medicinal preparations. Special attention is called to their *Impirea* range of toilet preparations—from bath tablets to face powders and creams. They are attractively packed, and show a good profit to the retailer. *W. B. Cartwright, Ltd.*, show a full range of their packed goods, notably *Elfida* powder and cream, etc., "*Moorland*" aspirin, heart shape indigestion tablets, and so forth. Selling aids in the shape of posters and cards are supplied. *Arthur H. Cox & Co., Ltd.*, Brighton, have a neat arrangement of their numerous specialities—pills, tablets and capsules of every kind in bulk, and packed with the chemist's own name; Dr. Wood's Health Salt, of a pleasant lemon flavour; and perfumery. Interesting are the new *Mornette* tablets—i.e., cod-liver oil minus the oil, but rich in vitamins and in cholesterol. These tablets should do much to popularise this new form of medication. *Ayrton, Saunders & Co., Ltd.*, are, as usual, displaying an encyclopædic range of goods. *Galenicals*, packed drugs, perfumery, toilet articles and soaps of every kind, surgical apparatus and dressings, and bottles for every purpose are only a few of the goods on this interesting stand. *A. de St. Dalmaz & Co., Ltd.*, specialise in toilet and fancy goods and in packed goods with the chemist's own name, medicinal and toilet. *Poppy Corn Paint* is displayed; this is a now a well-known preparation, and has a big sale. *T. & H. Smith, Ltd.*, are also specialists. They show emulsions, malt and oil, tablets, pills and capsules of every sort. *Cupal, Ltd.*, again specialise in emulsions of every kind, and they are displaying their well-known lozenges and jubes—*Cherry Barks*, *Cough Comfies*, *Catarrh Pastilles*, etc.—and also their *Diamond Corn Cure*.

GLASS BOTTLES

are of great interest to the pharmacist, and some excellent exhibits are made both by *Beatson, Clark & Co., Ltd.*, and by the *United Glass Bottle Manufacturers, Ltd.* Bottles of every size and shape and for every purpose are displayed. *Beatson, Clark & Co.* call special attention to their new opal pots (hexagonal) with aluminium tops, and claim that they are the only English makers of these.

PROPRIETARY LINES

As usual, proprietary lines are being beautifully displayed with more than usual thought and care. *Genatosen, Ltd.*, have a neat display of *Formamint*, *Sanato-gen*, *Nasmint* (a catarrh snuff), and *Genasprin*, as well as vaccines, de-toxicated and otherwise. *J. C. Eno, Ltd.*, have a beautiful display, and offer the retail chemist an object-lesson in window-show making, demonstrating the possibilities of the use of artificial grapes, loan of which may be had on request. The *Thermogene Co., Ltd.*, show how easily their goods may be arranged in striking masses, and visitors were seen making notes for future window-display purposes. Always *Kolynos, Inc.*, go to great trouble to put up a dignified display with old panelling and artistic furniture and so forth. Beside their dental cream, they are showing two new lines—*Kolynos* skin soap and *Kolynos* denture powder. Many advertising novelties may be had by chemists for the asking. *Feen-a-Mint*—a new proprietary—is a chewing gum containing phenol-phthalein, and if only we English can learn to chew it should prove a popular line. It is pleasant in flavour, and is meant to appeal

to children. Irving's Yeast Vite Tablets and Mr. Thomas Harley's Rodine are other lines on view. *Fassett & Johnson, Ltd.*, have a wide range of goods. They are British agents for Angier's emulsion, Sloane's liniment, Meares's talcum, California syrup of figs, and Diamond dyes, etc., as well as for Mead's plasters. They show also plasters and dressings of every possible kind, and call especial attention to their new wintergreen plaster.

OTHER EXHIBITS

Among patent foods we may mention the stand of *J. Nathan & Co., Ltd.*, who are showing Glaxovo, Glaxo, the Glaxo bottles, and Ostelin—a vitamin concentrate. Sister Laura's Food (*Sister Laura's Food Co.*) is again to the fore, and we were informed that the sales of this now popular food increase steadily. "Berina" (*Montgomerie & Co., Ltd.*)—a food for infants and invalids—has a stand to itself, along with Berina Malted Milk. *Horlick's* are showing their well-known products, and are offering free samples to all comers. The low price and excellent packing of these two lines should make an appeal to the whole trade. *Darling toilet lanolin* likewise has a stand to itself. *T. & H. Smith, Ltd.* (already referred to) have a fine drug section, and are showing particularly interesting specimens of fine chemicals, especially of caffeine, caffeine tri-iodide, emetine, atropin, hyoscyne, iridin, aloin, morphin and its derivatives, and so forth. *R. H. Allen, Ltd.*, have, as usual, an interesting and well-arranged display, which includes among their well-known lines the *Dulcilma Series* for the pharmacist, which is intended to be ultimately quite comprehensive—tablets, pills, liniments, pastilles, and all packed lines. Organo-therapeutic products are always of interest to the scientific chemist, and he may see them all at the stand of *Armour & Co., Ltd.*, and of *Endocrines, Ltd.* The last-named have a new preparation called "Anabolin," which reduces blood-pressure to normal, and which has been a great success. It is marked as liquid in ampoules for intra-muscular injection, and as tablets for oral administration. *Armour's* are showing all their well-known products, especially their pepsin, red bone marrow extract, and a range of organo-therapeutic products. The *Econasign Co.* specialise in a series of low-priced stencil outfits, which enable the chemist to print his own artistic showcards. The ink supplied dries instantly. The *Red Band Chemical Co.* specialise in Red Band magnesia, neatly packed and low-priced. *Cresswell Brothers* have their customary sponge display—sponges of every kind and size are arranged in a most interesting manner. The *Autoway Scale Co.* sell automatic scales, whereby the public may for one penny obtain their correct weight and the chemist a new source of profit. The scale is hand-somely made. The *Hunter Machines Co., Ltd.*, specialise in emulsifiers for the wholesaler and the retailer. *Calman's* specialise particularly in badger-hair shavers of the highest class. *Edward Taylor, Ltd.*, specialise in plasters, especially in adhesive tapes and in zinc oxide plasters, and in Taylor's Emergoplast, described as the cheapest first-aid dressing on the market. Corn plasters and mustard plasters are other specialities. All prices are on the P.A.T.A. Finally, *Slipperine, Ltd.*, make a bold display of Slipperine, a ball-room floor polish. Inexpensive, and attractively packed, this should prove a good winter selling line for the chemist on the look-out for something new.

Gazette

Partnerships Dissolved

- CONGDON, J. W., and KENWARD, S., 39 Westminster Bridge Road, London, wholesale and export chemists and perfumers, under the style of the Parkside Manufacturing Co.
- EAGAR, G. F. F., Russets, Chevet Lane, Sandal, Wakefield, and CROWTHER, W. H., 10 Harringay Grove, Turnpike Lane, Hornsey, N.8, vendors and manufacturers of cleaning and spraying preparations, under the style of the Sensoma Co.
- WELCH, C. F., and CALEY, W. A., 9-10 Jewry Street, London, drug merchants and essential oil importers, under the style of Welch & Horner.

Trade Report

42 Cannon Street, E.C.4, September 23.

BUSINESS in the Mincing Lane produce markets continues on a small scale so far as crude drugs are concerned, interest being diverted to the drug auction. On the speculative side, shellac shows considerable activity at a further substantial advance in all positions, and pepper is also active at fluctuating prices, showing a rise of 1d. to 2d. per lb. on the week. Chamomiles are slightly easier, owing to lack of demand, and Belgian valerian is cheaper for forward delivery. Ergot is irregular, the position remaining obscure. Cascara sagrada is inactive and senega easy. Balsam tolu and mandrake root are easier. Among essential oils, a considerable turnover is reported in Japanese dementholised peppermint for the July-August position, which is being manoeuvred by speculators. American is unaltered with buyers holding aloof. Star anise is dearer with a good spot inquiry. Cassia also has advanced. Bergamot and lime are firmer. Clove is cheaper. Among industrial chemicals, slack markets are reported from all areas, and there is little change in prices to record. Potash chlorate and permanganate are steadier; arsenic shows rather a better tone. Among pharmaceutical chemicals, there is little change in prices, business continuing quiet. Imports of chemicals are falling off in view of the uncertainty regarding the key industry duty, and this gives a temporary higher feeling to hexamine, while acetanilide is also dearer, as licences to import have been refused. Phenacetin is slightly firmer temporarily, and phenazone is unsettled. Mercurials are dearer, in view of the sharp advance in metal. In the fixed oils group business is of poor volume, and price alterations are in favour of buyers. These include palm, rape and linseed oils; other oils are easy on a small demand; olive oil is dearer.

Higher	Firmer	Easier	Lower
Acetanilide	Bergamot oil	Acid oils	Honey
Anise (star) oil	Cod-liver oil	Balsam tolu	Palm oil
Cassia oil	Fennel seed	Belladonna	Peppermint oil
Hexamine	(Fr.)	root	(Amer.)
Mercurials	Lime oil	Buchu	Petitgrain oil
Mercury		Cassia fistula	(Parag.)
Olive oil		Chamomiles	Valerian root
Orange oil (Sic.)		Clove oil	Belg. (forward)
Peppermint oil (Jp.)	Steadier	Linseed oil	
Pepper		Mandrake root	
Pitch		Rape oil	
Rubber		Senna (Tv.)	
Shellac	Arsenic	Wormseed oil	
Wood oil	Cedarwood oil	(Amer.)	
(Hankow)			

Cablegram

NEW YORK.—Business is quiet. Mercury has advanced to \$91.00 per flask, Cartagena ipecacuanha is lower at \$3.65, menthol is steady at \$4.65, and natural peppermint oil in tins is also steady at \$7.50 per lb.

Crude Drugs, etc.

- ACONITE ROOT.—Sales of *Napellus* have been made at 75s. per cwt. on the spot.
- ARNICA FLOWERS are quoted in the neighbourhood of 67s. 6d. to 70s. per cwt. c.i.f.
- BALSAMS.—Maranham *Copaiba* is quoted at 1s. 10d., Canada balsam in cases at 5s. per lb., B.P. Peru at 6s. per lb., and Tolu at 3s. 3d. to 3s. 4d. per lb., all spot.
- BELLADONNA.—New crop good testing root is offered at 50s. per cwt. on the spot; recent reports point to difficulty in collection and drying. Leaves are quoted at 65s. c.i.f.
- CADMIUM.—There is a steady sale for Australian at 1s. 9d., and buyers are showing no interest for supplies in other directions held at above that figure.
- CAMPOR (REFINED).—Japanese slabs are steady at 2s. 10d. per lb. on the spot, and for September-October shipment 2s. 8½d. c.i.f. is quoted.
- CHAMOMILES are slightly easier, due to the fine weather and lack of demand. Good first Belgian pickings of the new crop are worth fully 145s. per cwt.; current qualities vary from 127s. 6d. to 135s., and seconds at 120s. to

125s. per cwt. French are about 7s. 6d. higher than Belgian.

CHAULMOOGRA OIL.—Genuine *Taraktogenos Kurzii* is quoted on the spot at 2s. 9d. per lb.

CLOVES are quiet, fair Zanzibar offering at from 9½d. to 9½d. per lb., according to quality, and September-November at 8½d. c.i.f. The landings in London during the week ended September 18 were nil, and the deliveries 245, leaving a stock of 10,930 bales, against 8,758 bales in 1925 and 21,437 bales in 1924. Up to September 18 the landings of Zanzibar in London have been 9,968, against 10,476 in 1925, while the deliveries amount to 13,238, against 16,822 last year.

COD-LIVER OIL.—Our Bergen correspondent writes on September 20 that the cod-liver oil market continues dull, with a slightly easier tendency. Non-freezing steam-refined quality is, however, still quoted at 106s. per barrel c.i.f. London.

EGGOT.—The position remains unaltered with prices irregular to come forward, from 3s. 1d. to 3s. 4d. per lb. c.i.f. being quoted for Russian, with buyers holding off in the belief that prices will decline. Spanish or Portuguese does not appear to be offered forward, and on spot supplies at 4s. 3d. would be difficult to get.

FENNEL SEED.—French to come forward as the result of a short crop is quoted dearer at 32s. 6d. per cwt. c.i.f.

GUM ACACIA is steady, natural Kordofan sorts offering at 49s. per cwt., and cleaned at 51s.; to arrive, 44s. and 46s. c.i.f. is quoted respectively. Niger sorts offer at 35s. for bold and 25s. for palish small sorts.

MAGNESIUM.—The demand is only moderate, but English makers, in the absence of Continental competition, are well able to maintain their terms on the basis of 3s. 9d. to 4s. 3d. per lb. for sticks or small ingots, and quotations for powder range from 5s. to 6s. 3d. per lb., according to quality.

MENTHOL is inactive, and the nominal value of Kobayashi Suzuki on the spot is 18s. per lb. For shipment, Sept.-Oct. is 16s. 9d., Oct.-Dec. 16s., and Jan.-March 15s. 3d. c.i.f.

MERCURY.—In the latter part of last week there was another jump in the price on the spot to £16 per bottle, which is about the current quotation, although only a limited business has been reported done at that figure and at the close £15 17s. 6d. to £16 is quoted. It is quite possible that anticipations of the result of tenders for the disposal of the Spanish output for the new financial year have exerted a certain amount of influence on the attitude of importers. Meanwhile there is no overlooking the fact that supplies are rather short. Only 855 bottles came in last month, making a total of 9,910 bottles for eight months, compared with 15,525 bottles for the same period last year. Only 73 bottles were re-exported in August, making the total re-exports for eight months 1,694 bottles, against 3,328 bottles in 1924.

PEPPER shows an irregular advance, fair black Singapore having risen to 9½d. to 9½d. per lb. on the spot, closing at 9½d.; to arrive, Aug.-Oct. and Oct.-Dec. shipment is 8½d. c.i.f. value. Lampong is 10d. spot. To arrive, August-October shipment has been sold at 8½d. to 8½d. to 8d. Oct.-Dec. at 8½d. to 8½d. to 7½d. May-July at 9½d. to 9½d. c.i.f. Tellicherry spot is 10½d., and Alleppy 10d. White Muntok is dearer at 1s. 4½d. to 1s. 4½d. per lb. on the spot. To arrive, August-October has been sold at 1s. 2½d. to 1s. 3½d. to 1s. 2½d. Oct.-Dec. at 1s. 2½d. to 1s. 3½d. to 1s. 2d. c.i.f.

PIMENTO on the spot is quoted at 6d. per lb., September-November shipment being offered at 50s. per cwt. c.i.f.

PODOPHYLLUM ROOT.—*P. Emodi* is easier, spot offering at about 52s. 6d. per cwt.

RUBBER is much dearer, and has advanced since our last report about 3d. per lb., both for near and forward positions. For some time past we have indicated the firm tone of the market, and that cheaper prices need not be expected. There has been consistent buying all round; home manufacturers as well as American and Continental have all been covering immediate requirements. The firmness is due to the nervous covering by "bear" operators, and the probability of strong action by the Government later in the year. Stocks last week were again increased by 1,238 tons, and the London stock

now stands at 33,249 tons. Quotations (Wednesday, 5 p.m.):—No. 1 standard ribbed sheet, spot and September, 1s. 8½d.; November, 1s. 9d.; December, 1s. 9½d.; January-March, 1s. 9½d. per lb.

SEEDS.—Business conditions in the seed market are unaltered, and prices remain about the same as last. **CANARY SEED.**—Mazagan is 19s., Saffi 18s., good bold Spanish 32s. 6d., and small 24s. 6d. per cwt. **CUMIN SEED.**—Maltese is 30s. for old crop on the spot, and Morocco 29s. to 31s. **ANISE.**—Spanish is 50s., and Russian 37s. **CORIANDER SEED.**—Morocco is 14s. on the spot, and 13s. 6d. is quoted c.i.f. **DILL SEED** is scarce at 22s. **FENUGREEK SEED.**—Morocco is 11s. to 12s. spot. **HEMPSEED.**—Manchurian is 15s. per cwt. **LINSEED.**—Mazagan is 19s. 6d. on the spot. **MUSTARD SEED.**—English is steady at 45s. per cwt.

SHELLAC closed the week at 170s. to 175s. per cwt. for usual standard TN orange on the spot, and prices on Monday advanced to 180s. to 185s., at which they remain. To arrive, the sales include TN for October-November shipment at 152s. 6d. to 172s. 6d. to 165s. c.i.f., for delivery, the sales include, October at 175s., December at 165s. to 181s. 6d. to 176s. 6d. Calcutta closes at rs. 82 spot.

STRAMONIUM is quoted at 70s. per cwt. c.i.f.

VALERIAN ROOT.—Belgian for October-November shipment is offered at 60s. per cwt. c.i.f. A good crop is anticipated: the spot value is 145s. to 150s. per cwt.

WITCH HAZEL EXTRACT.—Distilled is quoted in forty-gallon casks at 9s. 3d. per gallon.

Essential Oils

WHILE the demand continues moderate, a noteworthy feature of the week is the firmness in numerous products. Star anise and cassia are both dearer, and spot inquiries for the former reveal the fact that holders are not inclined to sell. Japanese peppermint is dearer; American peppermint is slightly easier, and small business has been passing. English clove and American wormseed are cheaper. Paraguay petit-grain has declined.

ANISE (STAR).—"Red Ship" is firm on the spot, holders asking 3s. 6d. per lb. in view of the difficult c.i.f. position. September-October shipment is quoted at 2s. 11d. c.i.f., but there are few offers. There is a fair amount of spot inquiry.

BERGAMOT is firm on the spot, with sellers of 37 to 38 l.a. at from 27s. to 28s. per lb. as to brand. For shipment rather higher prices are wanted, from 27s. 6d. upwards as to brand. New crop, January-February shipment, is offered at from 21s. to 24s. 6d. c.i.f.

CASSIA on the spot is firmer at 8s. 6d. per lb. for 80 to 85 c.a., and for shipment 7s. 6d. c.i.f. is quoted, being dearer.

CEDARWOOD.—A steadier tone is noted in American, which has been subjected to keen competition recently. Drums are quoted at 1s. per lb. c.i.f., and 1s. 3d. for cases.

CITRONELLA.—Ceylon on the spot is steady at from 1s. 7d. to 1s. 7½d. per lb. Java is unchanged at 2s. 4d. and 2s. 2d. c.i.f.

CLOVE.—English distilled is cheaper at 5s. 9d. to 6s.

EUCALYPTUS.—A fair amount of inquiry is noted on the spot for 70 to 75 cineol, which is steady at 1s. 8½d. per lb.

JUNIPER BERRY.—Quotations continue to show considerable variation, but it is possible to buy oils with B.P. characters at from 8s. 6d. to 9s. per lb.

LAVENDER.—A fair amount of interest is centred in new crop French oil, but there appear to be no new developments. Importers state that new crop, 38 to 40 per cent. finest quality, should be worth about 22s. 6d. per lb. on the spot at the present level. Recently, however, spot sales of old crop have been made at from 17s. to 18s., at which there are still sellers. Very little business was done at the Digne fair, which was held recently, and while the crop this year is no doubt smaller than usual, the carry-over stocks were said to be considerable.

LEMON.—According to a report from the source, there was about 150,000 lb. of available stocks at the beginning of the month, and should there be a revival of demand, this quantity would soon be absorbed. The prospects of the new crop are stated to be good. The ultimate trend of prices is, as usual, obscure, and depends largely on the amount of uncovered sales contracted for, January and February shipments. Some exporters are suggesting that shipments be postponed until March or April. While early offers of this shipment were reported down to about 6s. c.i.f., 7s. c.i.f. now appears to be the lowest figure. One well-known brand is quoted at 8s. 8d., December-January. For prompt ship-

ment, prices quoted for well-known brands range from 9s. 6d. to 10s. 1d. per lb. c.i.f. to arrive. On the spot, the demand is dull, the season being practically over, and there are sellers at from 9s. to 9s. 6d.

LIME.—West Indian hand-pressed is nominal at 40s. per lb., with stocks non-existent. Distilled is also scarce at 35s.

ORANGE.—Sicilian sweet has been in fair demand, spot quotations being steady at 8s. 9d. to 9s. per lb. Higher c.i.f. prices have been mentioned for some brands.

PEPPERMINT.—New crop American natural tin oil is cheaper, and there is a certain amount of buying for immediate requirements. Prices range from about 30s. to 31s. per lb. c.i.f. Undoubtedly the use of Japanese demethylised among consumers in this country has made definite progress and is likely to continue in favour so long as American remains at a relatively high level. While further reductions are probable, when a level attractive to American consumers is reached, it is anticipated that the large consuming demand will, for a time, raise the value. In Japanese oil, interest this week has again centred in the July-August position, and a considerable turnover has taken place up to 12s. 3d. c.i.f. to 13s. and buyers; August-September shipment has been sold at 11s. 3d. to 11s. 6d.; September-October, 10s. 4½d.; October-December at 9s. 3d.; and January-March, 1927, at 8s. c.i.f. The July-August position is, of course, quite fictitious and not due to the requirements of actual consumers, but rather to speculators, who assume that there is still a large amount of "bear" covering to be done (mainly by Hamburg), and naturally the later positions rise automatically in sympathy. Spot sales have been made at 10s. 9d. to 11s. 6d. We understand that the other positions, such as August-September and September-October, are heavily oversold, and in view of the small shipments from Japan, for the next few months prices may further advance.

PETITGRAIN.—Paraguayan is cheaper at from 7s. 3d. to 7s. 6d. per lb. on the spot. To come forward, about 7s. c.i.f. is quoted.

Pharmaceutical Chemicals, etc.

BUSINESS continues to be reported as being rather quiet for most products, while the tone is fairly steady, except, perhaps, where a change is expected in regard to the liability to Key Industry Duty on imports. Acetanilide and hexamine are higher. Mercurials have also been advanced.

ACETANILIDE is firmer as no import licences appear to be granted, and one British maker has advanced his price 1d. per lb.; current rates are from 1s. 7d. to 1s. 7½d. per lb. for B.P. crystals and powder.

AMIDOPYRIN is unsteady and meets with only small business: dealers quote at about 11s. 6d. to 12s. per lb.

ASPIRIN.—While some dealers have reduced their prices for large quantities to about 2s. 3½d. and to 2s. 4d. for ordinary quantities, British makers' list price has been moved up to 2s. 5d., but this figure would be for very small parcels.

BARBITONE.—Business continues very light, and dealers' prices of 8s. 9d. to 8s. 10d. are unsteady and tend to weaken in due course.

BENZOIC ACID (B.P.) shows no change, with fair business being done: British, 2s. 1½d. to 2s. 3d. per lb., ex works; small spot parcels of Continental, p.f.i.e., 3s. 6d. per lb.

BENZONAPHTHOL shows no change on a quiet market: dealers quote five kilo parcels at 3s. 3d. per lb.

BROMIDES continue steady, with the volume of business rather limited: ammonium, 2s. 1d. to 2s. 2d. per lb.; potassium, B.P., crystals and granular, 1s. 8d. to 1s. 8½d.; sodium, B.P., 1s. 10d. to 1s. 11d. per lb. according to quantity.

CALCIUM LACTATE is steady and in occasional request. Dealers quote at about 1s. 3d. to 1s. 4d. per lb., according to quantities.

CHLORAL HYDRATE shows no change, with dealers offering duty-paid crystals at about 3s. 3d. per lb., in one-cwt. lots.

CITRIC ACID (B.P. crystals).—The buying season, which has now ended, has not been at all good, and throughout prices failed to harden to any appreciable extent. Quotations are now at about 1s. 3½d. per lb., less 5 per cent. for small spot lots of foreign and less for quantities to arrive.

CREOSOTE (B.P.) continues steady at 1s. 9½d. per lb., in demi-johns.

CREOSOTE CARBONATE remains dull at about 6s. to 6s. 3d. per lb., spot.

GUALACOL CARBONATE is dull and unsteady as quoted at about 7s. to 7s. 1d. per lb., spot.

HEXAMINE.—Owing to the possibility of this being taken off the Key Industry Duty, imports have fallen off and there is a temporary scarcity, with prices firmer at 2s. 4½d. to 2s. 5d. per lb. for ordinary quality and 2s. 5½d. for free-running crystals. Should imports arrive the above prices would not be maintained.

HYDROQUINONE, which declined in value last week, is still rather unsteady, with business very quiet: quoted from 4s. to 4s. 1d. per lb.

LECITHIN EX OVO is offered at 17s. 6d. per lb., in tins.

LITHIUM CARBONATE is offered at 6s. 9d. per lb., in cases.

MERCURIALS.—Owing to the sharp advance in mercury the makers have been compelled to raise the price of salts, which are as follows:—

	For assorted lots or contracts		Not less than	
	Under 112 lb.	s. d.	112 lb.	s. d.
Ammoniated lump, B.P. (white precip.)	...	5 0	4 11	
Ammoniated powder	...	5 1	5 0	
Ammoniated extra fine powder	...	5 2	5 1	
Bichloride lump, B.P. (corrosive sub.)	...	4 8	4 7	
Bichloride powder, B.P. or granular	...	4 1	4 0	
Chloride, B.P. (calomel)	...	5 2	5 1	
Red oxide cryst., B.P. (red precip.)	...	6 4	6 3	
Red oxide levig., B.P.	...	5 10	5 9	
Yellow oxide, B.P.	...	5 8	5 7	
Persulphate, white, B.P.C.	...	4 11	4 10	
Sulphide, black (hyd. sulph. cum sulph., 50 per cent.)	...	4 8	4 7	

METHYL SALICYLATE is a keen market, with prices ranging from about 1s. 4d. to 1s. 4½d., in carboys; a moderate business is reported.

METHYL SULPHONAL shows no change on a dull and unsettled market: dealers quote at about 15s. 3d. per lb. for quantities.

MILK SUGAR.—Dealers' prices are unchanged: finest Dutch, B.P., 61s. to 63s.; German, B.P., 60s. to 62s. per cwt., in cases.

PARA-FORMALDEHYDE (100 per cent. powder) is steady but decidedly quiet at 1s. 9d. per lb., in kegs.

PARALDEHYDE is steady at 1s. 2d. to 1s. 4d. per lb., according to quantity and packing.

PHENACETIN.—Dealers are limiting their stocks as much as possible, and for that reason there is a slightly firmer tone for spot, as quoted at about 3s. 10½d. to 3s. 11½d. per lb.

PHENAZONE is another unsettled item as regards spot values: dealers quote at about 5s. 9d. to 5s. 10d. per lb.; business is limited.

PHENOLPHTHALEIN is offered in one-cwt. lots at about 3s. 11½d. to 4s., and slightly less for large quantities; market quiet.

POTASSIUM PERMANGANATE (B.P.).—Conditions are steady, but spot stocks are limited for the time being: dealers quote at 6½d. to 6½d. per lb., for quantities, in two-cwt. drums.

RESORCIN seems rather steadier, with prices at about 4s. 3d. to 4s. 6d. per lb.; some limited business is reported.

SACCHARIN of 550 strength is quoted at from 51s. 3d. to 53s. 8d. per lb.

SALICYLIC ACID (B.P.) continues at unaltered rates of about 1s. 3d. to 1s. 3½d. per lb., according to quantity; business moderate.

SALOL remains rather quiet, but prices are steady at about 3s. to 3s. 1d. per lb., for quantities.

SODIUM BENZOATE (B.P.).—Quantities, in barrels, would be at slightly under the quoted rate of 1s. 8d. per lb., and large quantities to arrive at well under that figure; business fair.

SODIUM DIETHYLBARBITURATE is slack, with dealers offering at about 9s. per lb. spot.

TANNIC ACID.—B.P. *leviss* shows no change at 2s. 9d. per lb. for one-cwt. lots and up to 2s. 11d. for small parcels.

TARTARIC ACID (B.P. crystals) remains dull, with no change in quoted rates, at about 11½d. to 11½d. per lb., less 5 per cent., according to quantity for foreign.

TERPIN HYDRATE is seldom in request, at about 1s. 6d. per lb.

THYMOL.—Conditions show little change; prices vary a good deal as to quantity, from about 11s. to 12s. per lb.

VANILLIN.—Continental, 100 per cent. (not from clove oil) is quoted at 18s. per lb., and less for quantity; ex clove oil is about 19s.

Among the arrivals of chemicals which have paid Key Industry Duty are the following: Cocaine hydrochloride, £523; potassium prussiate, £130; salicylates, £140; undescrbed, £3,001.

Industrial Chemicals, etc.

London, September 22.

GENERALLY slack markets are reported from all industrial areas. This unsatisfactory position is no doubt due to the coal mining dispute. A disturbing feature of late has been the not infrequent happening of consumers, who were under

contract; being unable to take delivery of the monthly consignments. There is little change in prices to record.

ACETIC ACID has been a little more active on limited lines; prices quoted are for small parcels, and would be cheaper for large lots: 80 per cent. technical, £37; 80 per cent. pure, £33 per ton, in barrels; glacial, pharmaceutical, 99 to 100 per cent., £65 10s., in glass demijohns; glacial, in barrels, £55 per ton, ex wharf.

ACETONE.—There is hardly any business owing to the unsettled state of the market: quoted nominally at £72 per ton for B.G.S. in drums, ex wharf.

AMMONIA (ANHYDROUS).—The small spot business of the summer has fallen off a little. Dealers quote spot 99.95 per cent. at 1s. 1d. to 1s. 1½d. per lb., in loaned cylinders, carriage paid. Cheaper for contracts.

AMMONIUM CHLORIDE is steady, but the demand, so far as dealers are concerned, is very poor: grey galvanising, £22 per ton, in casks, ex wharf. Cheaper for forward delivery in quantities.

ARSENIC.—The tendency seems upwards, although some Cornish agents are still sellers at £13 5s., while others are asking £13 10s. f.o.r. mines. Grecian is not offering, being apparently marketed direct to America, and rather better terms are obtainable on this side. The demand in America is still reported quiet with the price at fully 3½ cents per lb.

BARYTES is steady but slow: dealers quote from £3 7s. 6d. to £5 15s. per ton, c.i.f., according to quantity and quality. The higher price is for fine white.

COPPER SULPHATE.—The export demand is still light, but the tone is steady, with the larger makers generally taking orders at between £23 15s. and £24 f.o.b., for casks, less 5 per cent.

CREAM OF TARTAR has been much quieter of late, with dealers' prices unchanged at 72s. to 73s. 6d. per cwt. net, for quantities to arrive.

FORMALDEHYDE seems a little steadier at about £40 per ton for small quantities of 40 per cent. by volume; slightly less for big lots.

FORMIC ACID is quiet but very steady as quoted: 85 per cent., £52 10s.: 90 per cent., £54 10s. per ton, in carboys, ex wharf.

GLAUBER'S SALT remains very slack, with spot parcels of commercial offering from £3 10s. per ton, in single bags. Cheaper for quantities to arrive.

LEAD PRODUCTS.—Lead acetate, spot, brown, £41 5s.; white, £43 7s. 6d. per ton, in casks. Market quiet. Red lead, imported, £38 10s., c.i.f. London; white lead, dry, £38; ground in oil, £39 10s., c.i.f. London. Business has been rather poor this week, but the general tone continues steady.

OXALIC ACID is short on spot, and for that position is steady at 3½d. to 3¾d. per lb.

POTASH CAUSTIC continues steady under Convention prices: 83/92 per cent. solid, £27 10s. per ton, in drums, ex store. Cheaper prices for contracts.

POTASSIUM CARBONATE is steady, but only in small demand: 83/92 per cent., £24 10s.; 96/98 per cent., £26 per ton, in casks, ex store. Cheaper for quantities to come forward.

POTASSIUM CHLORATE is steadier, but still quiet: powder, 3½d.; crystals, 3¾d. per lb., in kegs.

POTASSIUM PERMANGANATE is steadier after last week's reduction: dealers quote at 5d. per lb., for quantities in 2-cwt. drums; smaller lots, about 5½d. per lb.

POTASSIUM PRUSSIAN remains rather quiet, with prices unchanged at 6½d. to 6¾d. per lb. for yellow, in casks, ex store.

SODIUM ACETATE is irregular, with some dealers quoting at the higher rate of £20 15s. per ton; other offers at about £20 10s. Business remains poor.

SODIUM CHLORATE is quiet at about 3½d. to 3¾d. per lb.

SODIUM HYPOSULPHITE remains quiet, and dealers' prices are inclined to weaken: pea crystals, in one-cwt. kegs, £15 5s. per ton; commercial lump, in casks, £9 per ton. British makers' price for pure crystals for home consumers is £15 10s. per ton, carriage paid to buyer's station.

SODIUM NITRATE.—There is nothing to add to our comments of last week; the market remains practically neglected in London: 96 per cent., £11 17s. 6d.; refined, £12 7s. 6d. per ton, f.o.r. docks, London.

SODIUM NITRITE is also slack and easy as quoted: 100 per cent. basis, £20 per ton, and 20s. 6d. per cwt., docks, London.

SODIUM PRUSSIAN is steady at 3½d. to 3¾d. per lb. in casks.

SODIUM SULPHIDE is unchanged on a quiet market: 60/62 per cent. solid, £10 10s.; broken, £11 10s. per ton, in drums, ex wharf.

SULPHUR is very steady, with a moderate outlet. American crude, delivered Manchester, is held for £5 17s. 6d. per ton. Terms for Italian refined are on the basis of £12 to £12 5s. for flower, and £10 to £10 5s. for roll, delivered London warehouse.

ZINC PRODUCTS.—The tone is rather better in sympathy with raw zinc, but the demand for manufactured material is slow; zinc oxides vary from about £38 to £46, according to percentage of purity. Zinc ashes are somewhat easier, offers being made at about £14 to £14 10s., free on truck.

Fixed Oils, etc.

A VERY poor volume of business continues in this market, practically every item being sluggish so far as demand is concerned. Prices, where there has been an alteration, have moved to lower rates. ACID OILS.—Markets still slack and prices easier: coconut and palm kernel, 40s.; groundnut, 33s.; soya, 28s., spot. CASTOR.—No further change in prices and market still dull: pharmaceutical, 43s. 6d.; first pressings, 43s. 6d.; second pressings, 41s. 6d., spot, in barrels, in not less than one-ton lots. COCONUT.—Business remains quiet and prices about the same: deodorised, 51s. 6d. spot; Ceylon, 45s. 9d. c.i.f.; Cochín, 51s. c.i.f. COTTON continues dull: deodorised, 47s.; common edible, 45s.; soap-making, 45s.; crude, about 37s. 6d. spot. GROUNDNUT.—Business is still poor and prices about the same: deodorised, spot, 53s. 6d.; crude Oriental, 43s. c.i.f. PALM KERNEL is in little demand and prices quoted are unsteady: deodorised, about 48s.; crude, about 43s. 6d. spot. PALM.—Further reduction in spot prices are recorded and the market is still slack: Lagos, 37s.; softs, 36s.; mediums, 36s. 6d.; hards, 37s.; bleached, 39s. spot. RAPE is still quiet and a shade easier: refined, 51s. 3d.; crude, about 49s. spot. SOYA.—Business remains poor: deodorised, about 44s. 6d.; crude, 41s., in barrels, spot. LINSEED (raw, naked) has been quiet throughout and quotations for forward positions are easier: on spot, 31s.; September, 30s.; October-December, 30s. 7½d.; January-April, 31s. 9d. Boiled oil, 33s. spot. Hull, on spot, 31s. 3d.; October-December, 31s. 7d.; January-April, 31s. 10½d. TURPENTINE.—The market has been quiet throughout, partly under adverse fluctuations in the American markets. Trade demand is slow. Last week's deliveries were 1,704 barrels, making a total of 31,970 barrels since January 1, and the stocks were 18,381 barrels, this, with the afloats, making the visible supply 27,456 barrels, compared with 55,870 barrels same date last year. Spot closes at 63s., October-December 64s., January-April 66s., and May-June 64s. 6d. RESIN ruled slow except for spot and near positions. C.i.f. terms were as follows for American: BD, 30s. 9d.; E to M, 31s. 4½d.; W.G., 33s. 9d., and W.W. 34s. 9d. WOOD.—Hankow, in barrels, is quiet at the dearer quotation of 84s. spot. OLIVE.—B.P. is dearer at 6s. 8d. per gallon, in 40-gallon barrels.

LUBRICATING, MINERAL AND BURNING OILS.—Business continues generally slack, but there is little alteration in prices to record. Lubricating oils seem very steady, although rather quiet. Benzol and solvent naphthas remain scarce, owing to the coal-mining dispute. BENZOL.—With the coal dispute unsettled, supplies continue very limited at works; prices quoted are nominal: crude 65s. 1s. 4d. to 1s. 5d.; standard motor, 1s. 9d. to 2s.; pure, 2s. 3d. to 2s. 6d. per gallon, ex works, in tank wagons. FUEL OIL.—Quoted prices are unchanged and market is quiet. PARAFFIN WAX and SCALE.—Prices are unchanged. PARAFFIN OILS.—Markets remain firm and unchanged. WHITE OILS.—Business has been very slack of late; quoted prices unchanged but easy. SOLVENT NAPHTHAS.—Market still firm, with supplies very limited: 90/160, 1s. 11d. to 2s.; heavy 90/190, 1s. 4d. to 1s. 5d. per gallon, naked at works. PETROLEUM JELLIES.—Some slight alteration in prices is noted; market generally quiet: white to snow-white, £35 to £57; amber and yellow, £17 17s. 6d. to £22; red vet, £16 10s.; dark stiff green, about £12 12s. 6d. per ton, barrels free, ex wharf. LUBRICATING OILS.—There is no material change in shipment or spot prices; business remains quiet.

London Drug Auctions

Commercial Sale Rooms,
Mining Lane, London, E.C.3.
September 23.

A FAIR quantity of drugs was comprised in the ten catalogues, but the demand showed no improvement on that of recent auctions, and where business was done sacrifices in price were made in most instances. Cape aloes sold at steady prices, and for good liver Curacao fully previous prices were wanted, but no business was done. Buchu was easier, and supplies are plentiful and in more hands. Cardamoms were quite neglected, and for a string of cassia fistula easier prices were paid. Dragon's blood and gamboge failed to sell. Honey met with a poor reception, and prices were again in buyers' favour. Matto Grosso ipeacuanha brought about steady prices, and kola was irregular, some lots being cheaply disposed of. Rhubarb was in better demand at about steady rates, while for grey Jamaica

sarsaparilla prices were firm, being the same as those paid privately. Native Jamaica, on the other hand, was in large supply and neglected. Tinnerelly senna of the lower grades was disposed of at easier rates, and for good Alexandrian pods very high prices were asked. Beeswax was neglected with the exception of Jamaica, which brought firm prices. The following table shows the quantity of goods offered and sold, the asterisk denoting private sales:—

	Offered	Sold		Offered	Sold
Aconite root (Jp.)	10	0	Juniper berr.	6	0
Aloes—			Kino (Afr.)	12	0
Cape	32	14	Kola	27	16
Curaçao (cs.)	15	0	Lavender flow.	19	0
Zanzibar	6	0	Liquorice juice	34	0
Ammoniacum (cs.)	32	0	Lobelia	2	0
Anise (Russ.)	42	0	Manna	9	0
Annatto seed	321	20	Musk seed	4	0
Areca	27	0	Myrrh	86	0
Asaetida	12	7	Nux vomica	90	0
Balsam tolu	12	0	Olibanum	81	2
Benzoin—			Olive oil (brls.)	2	0
Siam	6	1	Orange peel	26	3
Sumatra	147	7	Orris (Mog.)	34	34
Buchu	118	4	Palmarosa oil (pots)	5	0
Cananga oil	1	0	Pareira brava	37	0
Cannab. Ind.—			Podophyllum root	29	6*
African	20	0	Quince seed	12	0
Bombay	1	0	Rhapontica root (Ch.)	18	0
Cantharides (gr.)			Rhapontica root (Fr.)	20	0
Russ. pkgs.	96	0	Rhubarb (Ch.)	64	16
Cardamoms	380	23	Rose buds	12	6*
Casarea sag.	124	0	Safflower	9	0
Cascarilla	5	0	Saffron (lb.)	15	0
Cassia fistula	236	52	Sandarae	20	0
Chamomiles	15	5*	Sarsaparilla—		
Chaulmoogra oil	5	0	Grey Jamaica	17	17
Chillies (Zan.)	56	0	Honduras	11	0
Cinchona	80	0	Native Jam.	54	0
Civet (hrms.)	18	0	Scammony gum	2	0
Cochinal	5	0	Scammony root	4	0
Colocynth	6	0	Scopolia root	6	6
Cubebs	51	0	Senega	8	0
Cumin seed	154	0	Senna and pods—		
Cuttlefish bone	257	0	Alex.	52	36
Damiana	10	0	Tinnerelly	229	51
Dragon's blood	61	0	Sponges (bls.)	2	0
Fennel seed	60	0	Squill	15	15
Galbanum	9	0	Strophanthus	32	0
Gambier cube	20	0	Tamarinds (W.L.)	29	0
Gamboge	14	0	Taraxacum	28	0
Gentian	59	5	Tjempaka oil (cs.)	1	0
Gualacum	4	0	Tonka beans	25	0
Gum acacia	130	3	Tragacanth	25	4
Henbane	17	0	Turmeric	167	0
Henna	5	0	Turtle dried	4	0
Honey—			Wax (bees)—		
Cuban	17	9*	Abyssinian	135	0
Guatemala	75	0	Brazilian	20	0
Hawaiian	100	0	East African	136	9
Hayti	167	0	East Indian	22	0
Jamaica	806	72	Jamaica	12	12
Porto Rico	27	0	Madagascar	20	0
St. Lucia	16	0	Rangoon	10	0
San Domingo	226	14	San Domingo	5	0
Trinidad	4	0	Zanzibar	56	0
Ipecacuanha—			Yohimbehe bark	215	0
Matto Grosso	25	8			

ACONITE.—A lot of ten bales Japanese offered, for which 70s. per cwt. was asked.

ALOES.—Cape was steady, four cases dull seconds selling at 41s. per cwt., and ten boxes of similar quality went at 40s. per cwt. Of Curaçao a new lot of fifteen boxes, comprising good smooth liver, were limited at 80s., good capcy at 70s., and coarse dark at 65s. per cwt.

ANNATTO SEED.—A lot of twenty bags sold without reserve, for account of whom it may concern, at 13d. per lb. for ordinary dull.

ASAETIDA.—A new lot of twelve cases offered and partly sold, comprising good dry brown blocky at 70s., and rather inferior at 55s. per cwt.

BENZOIN.—Good Sumatra seconds, well packed with small almonds, were limited at £8 10s. per cwt., and five cases country-cut and broken, with false packed ends, went at £7 10s. to £8 per cwt. Of Siam, a single case of small to medium loose almonds of good flavour sold at £26 10s. Medium to bold selected almonds were limited at £29 per cwt.

BUCHU was easier, two bales of round, part stalky and bronzy selling at 1s. 3d. to 1s. 4d. per lb. For two bales of good green ovals free from stalk, 1s. 4d. per lb. was paid.

CARDAMOMS met a slow demand, the few sales including Ceylon-Mysore medium to bold pale, 5s. 11d. to 6s. 1d.; small to medium pale, 4s. 8d.; small pale, 3s. 11d.; splits and pickings, 2s. 11d.; pale seed, 4s. 11d., good brown 5s. per lb. In one instance ten cases good Bombay seed were limited at 6s. per lb.

CASAREA SAGRADA.—A lot of 76 bags 1922 peel was bought in, the selling price not transpiring, and for 48 bags of 1924 peel in another catalogue, 82s. 6d. per cwt. was wanted.

CASSIA FISTULA sold cheaply, a parcel of 85 bags good sound West Indian being disposed of at 22s., and a single bag of Dominican in another interest at 25s. per cwt. A further lot of 123 bags of West Indian was bought in at 22s. 6d.

CINCHONA.—A lot of 54 bales Huanuco quill lying in Liverpool was limited at 1s. per lb., and a lot of six bales East Indian chips (total alkaloids 6.67) was bought in at 7d. per lb.

CUMIN SEED.—For a lot of 77 bags fair Maltese 28s. per cwt. was wanted.

GAMBEGE.—Three cases of Siam were held at £19 per cwt. for good orange fracture pipe, slightly blocky, and at £18 10s. for more blocky and slightly mixed with dark fracture.

GENTIAN.—Five bags of cut sold at 35s. per cwt.

HONEY showed no improvement in the demand, and prices were again in buyers' favour. Of Jamaica, 24 barrels pale setting to set sold at 40s. to 44s. per cwt.; 19 packages partly lemony setting sold at 40s. to 41s., these being the only prices disclosed. Approximately 25 packages had been disposed of privately. Twelve casks of San Domingo sold at 41s. per cwt. for cream set, and two packages Jamaica fermenting went at 29s.

IPECACUANHA was steady, eight bales Matto Grosso being disposed of at 14s. 3d. per lb. for fair sound, and at 13s. 10d. for ordinary part stemmy and part mouldy; good bright sound was held at 14s. 6d., at which sales have been made privately.

KOLA.—The small offerings were disposed of at steady prices, including six bags of good bold dried Jamaica halves at 3d., but a further ten bags Jamaica in another interest went cheaply at 2½d. per lb. A lot of eleven bags dull Ceylon halves was bought in at 3d. per lb.

LOBELIA HERB.—Two bales were held at 3s. 6d. per lb., the lot being bought in at 4s.

OLIBANUM.—A lot of two cases bold siftings sold at 100s. per cwt.

ORANGE PEEL.—A lot of 23 cases so-called Maltese strip offered, and three cases sold at 1s. 9d. per lb. for middling. The best lots good bright were held for 1s. 10d.

ORRIS.—A lot of 34 bags fair Mogador sold at 15s. per cwt., subject.

QUINCE SEED.—Several parcels of Capo were offered and bought in. Privately sales of fair have been made at 2s. 4½d.

RHUBARB was in rather better demand at about steady rates. Five cases medium to bold round Shensi, with three-quarters fair pinky fracture and one-quarter grey and dark, sold at 2s. 11d. to 3s.; one case medium to bold flat, with four-fifths pinky fracture, at 2s. 9d.; one case medium and small ditto, at 2s. 9d.; and three cases good to fair Shensi pickings, 2s. 1d. to 2s. Two cases dull coated medium to bold flat Shensi, with one-third pinky and two-thirds common greyish fracture, sold without reserve at 2s. 3d. per lb. A further four cases sold without reserve at from 1s. to 1s. 1d. per lb. for rough round part wormy High dried, with two-thirds grey and dark fracture and one-third pinky.

ROSE BUDS.—A parcel of six bales fair Morocco had been disposed of privately, and for six bales of slightly wormy, offered without reserve, no bid was made.

SARSAPARILLA was quite firm for grey Jamaica, which is scarce; 17 bales offered and sold at 1s. 7d. per lb. for fair to good grey to ordinary coarse. Sales privately have been made at 1s. 7d. Native Jamaica, on the other hand, was quite neglected, 54 bales being bought in at from 1s. 5d. to 1s. 6d. per lb., mostly for dull red and yellow mixed; eleven bales slightly wormy Honduras were bought in at 2s. 3d. per lb.

SCOPOLIA ROOT.—A lot of six bales Japanese sold without reserve at 5s. 6d. per cwt. for .03 test.

SENNA.—Tinnerelly was easier, bold greenish selling at 5d. to 5½d., middling greenish at 3½d. to 4d., and ordinary small at 2½d. to 3d. Twenty-five bales Tinnerelly pods were bought in at 5d. A lot of 29 bales ordinary broken Alexandrian leaf sold without reserve at 4d. per lb., and for three cases good pale pods a bid of 6s. per lb. was refused, 6s. 6d. being wanted. Seven bales ordinary three-quarter leaf sold at 5d. per lb.

SQUILL.—A lot of fifteen bags dull seconds sold at 16s. per cwt.

TURTLE DRIED.—Four cases sold at from 3s. to 3s. 4d. per lb. for part slightly mouldy.

WAX, BEES', was neglected, with the exception of Jamaica, twelve bags of which sold at the firm price of £9 to £9 2s. 6d. for red and brown mixed. Nine blocks of part drossy East African sold at from 165s., subject to seller's approval.

YOHIMBEHE BARK.—A lot of 215 bags offered without reserve, but no bid was made. For an identical parcel in a previous sale 3½d. per lb. was paid.



Chemistry House

SIR,—I have read with much interest your editorial article on this subject (*C. & D.*, September 18, p. 482). You have referred to the discussion which took place in July, but have not dealt with the full account of the negotiations concerning Chemistry House which appeared in the "Journal of the Society of Chemical Industry" on August 27. Your comments show the need that exists for such a scheme; you state that "there is still a great lack of understanding between the aims of the different sections, owing to the fact that each uses its own language." This is perhaps putting the matter rather more strongly than I should have done myself, but I am, as you are, convinced that it will be advantageous to all sections of chemistry that those concerned in them shall have one central place where the opportunities for meeting will be more frequent and convenient. I do not think that pharmaceutical chemists need be either alarmed or annoyed by the question raised by the British Association of Chemists; while there are many chemists who desire the formation of further registers of chemists, there are at least as many others who see no advantage to chemistry in such registers commensurate with the many difficulties of preparing and maintaining them. Surely you exaggerate the differences which exist in our ranks. I do not find that the chemical engineer looks down on the works chemist; they work together to their mutual esteem and advantage. The academic chemist is no longer afraid of being tainted by contact with industrial chemistry. You will find abundant instances of academic chemists who have taken an active part in industrial chemistry. The professors of chemistry of both Oxford and Cambridge Universities are directors of companies engaged in the manufacture of chemicals, and if you look at the list of my predecessors in the presidential chair of the Society of Chemical Industry, you will find many instances of academic chemists who have been proud to associate themselves with industrial chemistry. The Society has for very many years used its considerable influence to bridge over all gaps, including the gap between chemistry and pharmacy, and the general progress in recent years in the study of biochemistry and pharmacology shows that chemists of many different sections have been able to work together for the benefit of humanity. I am entirely in agreement with your statement that only by co-operative study and endeavour can Chemistry House be raised; its achievement will pave the way to better and more complete co-operation; the question of a stolen "title" does not exist. There are many pharmaceutical chemists, many bio-chemists, many academic chemists and many chemical engineers whose support for the scheme can be relied upon, and you may be sure that those who for two or three years have worked at the scheme have done so in the belief that chemistry in all its aspects will benefit by it, and that chemistry must be considered in such questions as a whole and not as a collection of separate entities.

Yours faithfully,

FRANCIS H. CARR,

President of the Society of Chemical Industry.

The Late Mrs. Clarke-Keer

SIR,—The passing of Mrs. Isabella Clarke-Keer at the age of 83 (*C. & D.*, September 18, p. 479) brings back to the mind of the pharmaceutical historian the memory of many hard fights during some six strenuous years. At the annual general meeting of the Pharmaceutical Society of Great Britain on May 24, 1873, a resolution was proposed by Mr. Robert Hampson, a member of the Council, afterwards treasurer, to the effect that as the examiners of the Pharmaceutical Society are empowered by law to test the qualifications of persons—female as well as male—before they can keep "open shop," if they do pass either of the qualifying examinations, they should be admitted as associates or members of the

Society. This resolution was defeated by a large majority. In fact, the resolution that was passed on that occasion was to adjourn the whole question *sine die*. In the Preliminary examination held in January of that year, out of the 166 successful candidates, 313 sitting, were two women. They were Rose C. Minshull, who headed the list, and Louiza Stammwitz, who was well up in the list. In February these two and Alice Marion Hart applied to the Council for registration as apprentices or students. This application was refused by a majority of one vote. In October 1877 Isabella S. Clarke (who afterwards became Mrs. Clarke-Keer, applied for membership of the Society. Her election was refused by eight votes to four. In November 1877 Rose Minshull and Louiza Stammwitz, who had now passed the Minor, applied for election as associates of the Society. This was refused, though the President said that these two ladies headed the list of successful candidates on the day they qualified. They had the two top places in chemistry, and though 600 marks was the minimum to secure a pass, one of them succeeded in gaining 800. The whole subject, however, was sent to the next annual general meeting, held on May 15, 1878. This was a very stormy meeting, and after much discussion a vote was taken, and the President declared that by a large majority women were not to be admitted. On this being challenged, and the votes being counted, it was 59 to 57. It was left for Council to deal with at their next meeting in June 1878. It was then moved by Mr. Hampson that Miss Clarke be elected a member of the Society. The voting was even, eight each way, so the chairman, who had already voted, gave his casting vote against the ladies. Mr. Hampson now proposed that Miss Minshull and Miss Stammwitz be elected associates, with the same result. The next step was taken at the 1879 annual meeting, when the question was again discussed. On a vote being taken, 65 voted for the ladies and 65 against. The figures being challenged and a division was demanded, when the figures were "for" 78, "against" 81. It was understood that this was only an opinion, and was not binding on the Council, so it was no surprise when, on October 1, 1879, Miss Clarke and Miss Minshull were elected members of the Pharmaceutical Society with but one dissentient vote. The modern miss sometimes acts and speaks as if all her liberty and freedom had been won during the last ten or twelve years. She either knows not or has forgotten that the women who really defied Victorian convention and stood for equal intellectual rights when the whole of civilisation was against them were the women of the time I have referred to, and in pharmacy the particular ones I have mentioned. They and the men associated with them in that struggle should not be forgotten.

Yours faithfully,

JUSTIN LINCOLN (21/9).

Appreciations

I would as soon miss my breakfast as the *C. & D.*—
A. W. R. (19/7).

C. & D. always welcome and much appreciated.—
W. N. P. (15/7).

Wishing the *C. & D.* the greatest success, which it so highly deserves in the realms of pharmacy.—*D. G. H.* (30/7).

Retrospect of Fifty Years Ago

Reprinted from

"The Chemist and Druggist," September 15, 1876

New Pill Excipient

Mr. G. Welborn before the B.P.C. referred to the unsatisfactory condition which several of the pill-masses of the Pharmacopoeia acquire by long keeping which, he said, could, in a great measure, be prevented by substituting the following mixture for some of the official excipients:—

Gum tragacanth, in powder	...	...	...	...	1/2 oz.
Glycerine and water, of each	...	...	...	...	2 1/2 oz.
Oil of pimento	...	...	...	...	5 drops
Mix.					



[Commenced C. & D., July 5, 1924]

Graphs, Use of.—The trader who wishes to keep a check on his turnover, or desires to see at a glance what progress he is making with the sale of specific articles, should make a practice of using graphs. These are charts which show by means of diagrammatic curves any numerical or statistical data desired. Specially ruled paper should be procured for the purpose, and if it is intended to keep it for reference the pages should be perforated with two holes for filing in a loose-leaf binder. Where the graph is to be hung on a wall for permanent reference, it is as well to brush a light varnish over the surface. This prevents it from getting dirty, and permits of an occasional rub over with a damp cloth. The usual method of constructing a graph is to arrange the times (days, or whatever periods are used) along the top, and the progress figures, in units (tens, hundreds, or whatever other form is suitable) down the left-hand side. Thus, if it is wished to record that the sales of a certain product reached 150 on a certain specified date, a dot is placed on the horizontal line coinciding with the figure on the left-hand side, at the point where it crosses the vertical line underneath the date mentioned. Permanent use of graphs eliminates the necessity of making numerous diary notes, and saves time in looking up back records in files or note-books. The entering up of the details concerned should be made a matter of daily or weekly routine, otherwise figures or facts may be overlooked, and the reliability of the charts impaired.

Grass Oils.—See Citronella, Lemongrass, Gingergrass, Vetivert, etc

Greece.—Subject to the approval of the Minister of Health, acting on the advice of the Superior Council of Health, a pharmacy may be established in a place possessing at least 500 inhabitants, one additional pharmacy being permitted for every 2,000 persons above this number up to 20,500, and for every 2,500 inhabitants in towns with a population in excess of this figure. No pharmacist may own more than one business. After being in possession of the pharmacy for at least two years, the owner may transfer it by sale or otherwise to another pharmacist, in which case, however, he is debarred from submitting an application to open a new pharmacy, as well as from competing for a vacancy, until a period of five years has elapsed from the date of the transfer. An exchange of businesses between pharmacists is allowed, provided both have held their respective pharmacies for at least two years. On the death of the owner of the pharmacy the widow, or children, may sell the business or have it managed on their behalf for a period of ten years. Medical practitioners are permitted to dispense medicaments to their patients only if the nearest pharmacy is at least three kilometres distant. Laboratories in which pharmaceutical preparations are manufactured must be in charge of a pharmacist or chemist approved by the Superior Council of Health. Manufacturers are permitted to sell wholesale only their own products, and agents only the products of those firms which they actually represent, as certified by the local chamber of commerce. Pharmacists, manufacturing and wholesale druggists, as well as agents for pharmaceutical products, may not hold any government, municipal or other public office, nor may they engage in any other form of business. Entrants into the profession are required to complete a course of study extending over four years in the pharmacy section of the Faculty of Physical and Mathematical Sciences in

the National University of Athens. In addition to passing examinations at the end of each year, on completing the four years' course the candidate has to sit for an examination to obtain the qualification of "Licentiate of Pharmacy," followed by a period of twelve months' pupillage in a pharmacy in a town of at least 5,000 inhabitants. At the conclusion of this term of practical training the Licentiate of Pharmacy presents himself for the final qualifying examination before the Superior Council of Health, on passing which he receives the diploma of pharmacist. The degree of Doctor of Pharmacy is obtainable on presenting to the Faculty a thesis embodying original research work. The importation and distribution of opium and coca, their derivatives and preparations, is a monopoly of the state; the cultivation of the poppy may be undertaken only by licensed persons. The manufacture, importation, sale and advertisement of pharmaceutical specialities, artificial mineral waters, dietetic products and certain toilet articles, such as dentifrices, hair dyes, etc., requires a licence, for which application has to be made to the Minister for Health. In this application a full disclosure must be made of the composition of the product; the fee for registration is fixed at twenty-five times the retail price printed on the largest-size package. In the case of medicinal preparations of foreign manufacture, a licence to import and sell is granted to an authorised Greek pharmacist or wholesale druggist, provided that the sale to the public of the preparation in question is permitted in the country of origin. All pharmaceutical specialities submitted for registration are examined by a commission consisting of three members, one of whom is a pharmacist, appointed by the Superior Council of Health, prior to the issue of the licence. The chief active ingredients of the preparation must be given on the label, and also in all advertisements, as well as the directions for use, and the retail price, which has to be approved by the Superior Council of Health. Licensed preparations may be retailed only in pharmacies. The second edition of the Hellenic Pharmacopœia, published in 1924, was elaborated by a commission appointed by the Government, consisting of eleven medical members and eleven chemists and pharmacists; with the exception of the official Latin titles, the Greek language is used throughout the work. An official drug tariff is in force, issued by the Superior Council of Health, for the pricing of prescriptions, etc.

Greenwich Time.—The solar day does not furnish a uniform measure of time, and it is therefore necessary, for practical purposes, to adopt an imaginary mean sun moving at a uniform rate. (A sidereal day—i.e., the time between two transits of the same star over a given meridian—is about three minutes less than a mean solar day.) This mean sun is calculated by a complex mathematical process. Allowance is made for longitude by the compromise of adopting the calculated time of the capital of a country (in the case of the British Isles, Greenwich). By the Statutes (Definition of Time) Act, 1880, it is provided that expressions referring to time in statutes, deeds or other legal instruments shall, unless the contrary is expressed, be read as referring to Greenwich time.

Greetings, Seasonable.—The chemist can do a great deal towards creating a seasonable atmosphere in his shop and window by the use of suitable greetings and appeals. All sorts of coloured posters, showcards, streamers, backgrounds, friezes, dados and decorations are obtainable from firms specialising in display requirements. It pays to make extensive use of topical and seasonable display aids of this sort, as they have the effect of imbuing visitors to the shop with the spirit of the time, and of reminding them of gifts, household necessities, and so on, by drawing their attention to articles suitable for the occasion or season. In addition to such festivals as Christmas, New Year, Easter, and August Bank Holiday, greetings and selling appeals relative to topical or local events may be introduced into the shop or window with advantage.

Gregory's Powder is not a dutiable title under the Medicine Stamp Acts (see C. & D., II, 1904, p. 651).

The C.&D. Commercial Compendium

Grenada.—A licence must be taken out to carry on the business of a chemist and druggist, and the Governor is empowered to grant a certificate of qualification as a chemist and druggist to any person: (1) who possesses a diploma or certificate entitling him to practise as a pharmaceutical chemist or as a chemist and druggist, or as an apothecary in any part of the United Kingdom; (2) who possesses a diploma or certificate entitling him to practise as a pharmaceutical chemist or as a chemist and druggist or as an apothecary in any British Colony, if the Medical Board is satisfied that his qualifications furnish sufficient guarantee of his knowledge and skill; (3) who has been engaged for at least three years in the study of pharmacy, the last year of which has been devoted to dispensing work under a registered medical practitioner or a licensed chemist and druggist, and has passed an examination before two medical practitioners of the Colony nominated by the Governor. This examination consists of three parts: Written, oral, and practical, and the candidate is required to show: (1) a thorough knowledge of the British Pharmacopœia; (2) a knowledge of all poisons, their actions, doses and antidotes; (3) a knowledge of all drugs in common use in the United Kingdom and its Colonies; (4) a thorough knowledge of all weights and measures in common use, including the metric system; (5) a knowledge of elementary chemistry; (6) reading of prescriptions. The fee for the licence to carry on the business of a chemist and druggist is £1, the same fee is also payable in respect of the first or principal dispenser connected with or in charge of the shop, while for the licence issued to a second, third or other subordinate dispenser employed under the same management a fee of 5s. is charged; all licences have to be taken out every half year. The Sale of Poisons Ordinance, 1903, stipulates that poisons mentioned in Part I of Schedule A may not be sold to any person unknown to the seller, unless introduced by some person known to the latter, and every sale has to be entered in the poison-book. No drug or medicine containing a scheduled poison may be retailed, dispensed or compounded unless a person possessing a certificate of qualification is actually present at the time. Under the Venereal Diseases Ordinance, 1917, the Governor is empowered to declare that certain specified drugs or medicines may be supplied only on the prescription of a medical practitioner, and by Orders in Council of 1918 and 1922 this restriction applies to: Copaiba; sandalwood oil; cubebs; sodium iodide; potassium iodide and any preparation containing any of these drugs; mercury in combination with the iodides; grey powder in combination with Dover's powder. The Dangerous Drugs Ordinance, 1926, prohibits the cultivation in the Colony of *Cannabis sativa*, *Papaver somniferum*, *Erythroxylon Coca*, *E. novo-granatense*, and other varieties of *Erythroxylon* from which it is possible to extract cocaine either directly or by chemical transformation. It is also forbidden to import, or export, raw and prepared opium, crude cocaine, coca leaf, and Indian hemp or the resin obtained from the latter. The importation, and exportation, of medicinal opium, ecgonine, morphine, diacetylmorphine, cocaine and their salts, all official and non-official preparations (including the so-called anti-opium remedies) containing not less than 0.2 per cent. of morphine, or 0.1 per cent. of cocaine, all preparations containing diacetylmorphine, galenical preparations (extract and tincture of Indian hemp, and of any other narcotic drug to which this Ordinance has been applied by Order in Council), is prohibited except under licence. All these drugs have, on importation, to be deposited at the cost, risk and peril of the importer in a store appointed by the Governor for that purpose, from which they may be withdrawn only on the written authority of the Chief Medical and Health Officer, issued only to a registered medical practitioner or dentist, or to a licensed chemist and druggist. The following are the rates of duty chargeable according to the British Preferential Tariff, those specified in the General Tariff are given in parentheses:—Aerated and mineral water, natural and artificial, 6d. (9d.) the dozen; chemicals, 10 per cent. (15 per cent.) *ad val.*; opium and Indian hemp, 25s. (37s. 6d.) per lb.; medicines and drugs, 10 per cent.

(15 per cent.) *ad val.*; essential, medicinal and perfumed oils, 8d. (1s.) per gallon; perfumery, not including perfumed spirits, 20 per cent. (30 per cent.) *ad val.*; common soap, 2s. (3s.) per 100 lb.; medicated, perfumed and fancy soap, 8s. 4d. (12s. 6d.) per 100 lb.; medicinal spirits, admitted as such by the Collector of Customs, and bay rum, 5s. (7s. 6d.) per gallon; perfumed spirits, including dentifrices, toilet preparations and washes, 10s. (15s.) per gallon.

Grogging.—Name given to the extracting of spirits from the wood of casks. It is forbidden by the Finance Act, 1898, section 4 of which makes it an offence punishable with a fine of £50 for anyone to "(a) subject any cask to any process for the purpose of extracting any spirits absorbed in the wood thereof; or (b) have on his premises any cask which is being subjected to any such process, or any spirits extracted from the wood of any cask." And if more than one cask is grogged cumulative penalties are incurred in respect of each cask. The spirits obtained by grogging are also liable to forfeiture. The common method of grogging is by putting water, preferably warm water, in the cask so soon as it has been emptied; and if in fact grog is extracted when water has been put in a cask, it is immaterial with what object the water was put in the cask. The Commissioners of Customs and Excise do not, however, object to the rinsing out of a recently emptied spirit cask with cold water in the course of a racking or blending of spirits, although some spirits which would otherwise remain in the cask may be extracted in this way. Further, in order to constitute the offence of grogging, it is necessary that some actual process of extraction should have been employed. If, owing to the action of the sun's rays on the outside of a spirit cask recently emptied, spirits are caused to exude and collect inside the cask, this would not be enough to constitute the offence of grogging, at all events unless the cask has been deliberately placed in the sun with that view.

Gross.—Term applied to twelve dozen of any commodity. The word is found in England so far back as 1411 (with the spelling "groos"); it is referred by philologists to the Old French "gros, grosse," and ultimately to the late Latin "grossus," with a general meaning of "large." A great gross is another name for twelve gross. Used as an adjective before such words as estate and receipts, "gross" signifies a total without the deduction of any sums that may normally have to be allowed for.

Gross and Net Weight.—The weight of all kinds of goods is usually calculated by gross weight and net weight. *Gross weight* is the weight of goods, including the cases, barrels, wrappers or other material in which they are packed or contained—that is, the total weight without deduction. *Tare* is the weight of the case, cask, bag, wrapper, or other article in which the goods are packed or contained. Tare is calculated in several different ways according to the custom of the trade. *Particular* or *actual tare* is the actual weight of the cases, bags, etc., in which the goods are packed. *Average tare* means that the real tare of a few packages out of the whole number is taken as an average for the whole. *Customary tare* is a fixed uniform allowance off the gross weight of certain goods, determined by the custom of the trade. *Net weight* is, of course, the actual weight of the goods, i.e., gross weight less tare or other allowances. *Tret* is now almost obsolete. It represents an allowance for wear, damage or deterioration in transit, or for dust or sand mixed with a commodity. Drugs, herbs, seeds, etc., are frequently sold *gross for net*, which means that the goods are sold at the gross weight and invoiced accordingly.

Ground Rent.—The annual sum paid by the lessee under a lease of land granted for building purposes is called a ground rent. The amount of the rent represents merely the annual value of the land as a building site, and is small compared with the rent which is afterwards paid under a lease of the property, including the buildings.

HOWARDS' ASPIRIN TABLETS P.A.T.A.

A Special Window Show

BONUS

DURING OCTOBER ONLY

of 48 x 10d. bottles *free* with orders
for 2 gross small size (or equivalent)

HOWARDS' ASPIRIN TABLETS

if a window show is made.

On a £10 order this shows retailers

107½% PROFIT

on P.A.T.A. terms.

DISPLAY MATERIAL SUPPLIED FREE

Backed by judicious public advertising Howards' Aspirin
Tablets are an excellent and paying proposition.

HOWARDS & SONS, LIMITED (*Established 1797*), ILFORD

THE UNITED ALKALI CO. LTD.

CHLORIDE OF LIME

In $\frac{1}{4}$ -lb., $\frac{1}{2}$ -lb., and 1-lb. Cartons and Zinc Canisters.

Specially Prepared for use in Tropical Climates.

CHLOROFORM B.P. Quality

SPEEDO W.C. Bowl Cleanser and Disinfectant

"CHLOROS" Liquid Disinfectant

Invaluable for use in connection with Foot and Mouth Disease. Packed in returnable 5-gall. jars

PROMPT DELIVERY CAN BE GIVEN.

Telephone:
Bank 9280.

Head Office : CUNARD BUILDING, LIVERPOOL.

Telegrams:
"Ubique."

ALKALOIDS "SANDOZ"

ARECOLINE HYDROBROMIDE
ARECOLINE HYDROCHLORIDE
ATROPINE PURE
ATROPINE SALICYLATE
ATROPINE SULPHATE
BRUCINE PURE
BRUCINE NITRATE
BRUCINE SULPHATE
CEPHAELINE PURE
CEPHAELINE HYDROCHLORIDE
COLCHICINE PURE
COLCHICINE PURE AMOR-
PHOUS
COTARNINE HYDROCHLORIDE
COTARNINE PHTHALATE
EMETINE HYDROCHLORIDE
ESERINE SALICYLATE
ESERINE SULPHATE
HOMATROPINE PURE
HOMATROPINE HYDROBROMIDE

HOMATROPINE HYDRO-
CHLORIDE
HOMATROPINE SULPHATE
HYDRASTININE HYDRO-
CHLORIDE
HYOSCINE HYDROBROMIDE
HYOSCINE HYDROCHLORIDE
HYOSCYAMINE PURE
HYOSCYAMINE HYDROBROMIDE
HYOSCYAMINE HYDRO-
CHLORIDE
HYOSCYAMINE SULPHATE
PILOCARPINE PURE
PILOCARPINE HYDRO-
CHLORIDE
PILOCARPINE NITRATE
PHYSOSTIGMINE SALICYLATE
PHYSOSTIGMINE SULPHATE
SCOPOLAMINE HYDRO-
BROMIDE

SCOPOLAMINE HYDRO-
CHLORIDE
THEBAINE CRYST.
THEBAINE HYDROCHLORIDE
STRYCHNINE, all salts
VERATRINE PURE
VERATRINE SULPHATE
YOHIMBINE HYDROCHLORIDE
YOHIMBINE TABLETS in tubes
of 10 tablets of 0.005 gramme
YOHIMBINE TABLETS, for Vet-
erinary use in tubes of 10 tablets
of 0.1 gramme
YOHIMBINE TABLETS, for Vet-
erinary use in tubes of 10 tablets
of 0.01 gramme
METHYLENE BLUE MED.



The SANDOZ CHEMICAL Co., Ltd.
(Pharmaceutical Department), BRADFORD.

Telephones: BRADFORD 6302, 6303.

Telegrams: "SANDOZ, BRADFORD."



ASSOCIATED HOUSES IN:—
BASLE, NEW YORK, TORONTO, PARIS, MILAN, BARCELONA,
SWITZERLAND. U.S.A. CANADA. FRANCE. ITALY. SPAIN.



BUY FIRST HAND

ACID HYDROFLUORIC
ACID TANNIC LEVIS
BARBITONE
BROMIDES

RAD.

BELLADONA

FOL.

BELLADONA

CHLOROPHYLL

GUAIACOL CARB.

HEXAMINE

PHENOLPHTHALEIN

POT. PERMANGANATE
SULPHONAL, ETC.

WE SOLICIT ENQUIRIES FOR ALL PHARMACEUTICAL, GENERAL &
PHOTOGRAPHIC CHEMICALS, also CRUDE DRUGS.

JOHNSON & SONS

23 Cross Street,
Finsbury, E.C.2

Manufacturing Chemists, Ltd.
TELEPHONE: CLERKENWELL 1660.

12 Queen Street,
Manchester

BEECHWOOD CREOSOTE B.P.

AMYL ACETATE PURE.

HYPOSULPHITE OF SODA PEA CRYSTALS.

SODIUM SULPHITE PEA CRYSTALS.

ISO-PROPYL ALCOHOL.

EPSOM SALTS.

GLAUBER SALTS.

MILK
SUGAR.

FULL LIST ON APPLICATION.

CHAS. PAGE & Co., Ltd.
37/39 King William Street, London, E.C.4.

Telephone:
CITY 5408.

Telegrams:
"PAGANINI,
CANNON,
LONDON."

ALL OTHER CHEMICALS.

ACIDS—
TANNIC
& LACTIC

HEXAMINE.

BROMIDES OF:—SODA,
AMMONIA & POTASH.

CALCIUM LACTATE.

PARAFORMALDEHYDE.

SODIUM BENZOATE & BENZOIC ACID.

Apply for Samples and Particulars.

JAPANESE

TRADE MARK


QUININE

SALTS

B.P. 1914

Manufactured by
HOSHI PHARMACEUTICAL CO., Ltd., TOKYO, JAPAN.

STOCKS IN LONDON
AT COMPETITIVE PRICES FROM SOLE AGENTS
RALPH L. FULLER & CO., LIMITED,
Phone: Royal 1677-1678, 21 Harp Lane, London, E.C.3. Wires: "Ralfuller, London."

GLYCERINE

PRECIPITATED CHALK, MINERAL OILS & JELLIES
LIQUORICE guaranteed pure
(BLOCK, STICK & ROOT)
DECOLORISING CARBON
COD LIVER OIL. OLIVE OIL. CASTOR OIL.
PERSULPHATES: Ammonium, Potassium and Sodium.

HALLER & PHILLIPS, LTD.
(Established as GEO. HALLER & CO., in 1878)
Mildmay Chambers, 69 Bishopsgate, London, E.C.2
Phones: London Wall 4456/7. Tel. Add.: "Haloid, Stock, London."

"USINES CHIMIQUES DUPECO"

NUCLEINIC ACID & NUCLEINATES
ADRENALIN (SYNTHETIC)
LECITHIN & CHOLESTRIN
DIASTASE & DERIVATIVES
ORGANOTHERAPEUTICAL &
FUERST PHYSIOLOGICAL PRODUCTS
BROTHERS METARSENIO BENZOL SACA
& CO. LTD. ZINC & MAGNESIUM STEARATES
17 PHILPOT LANE, LONDON, E.C.3. Phone: ROYAL 6911.

BURKETT, SHARP & CO., LTD.

DRUGS 21, MINCING LANE, **CHEMICALS**
LONDON, E.C.

Warrington Chemical & Drug Co., Ltd.
Paddington, nr. Warrington.
Telegrams: "Sallein, Warrington."

ACID SALICYLIC **PARA AMIDO PHENOL** **SODA SALICYLATE**

ALKALOIDS

Fine Chemicals Opium Derivatives

SALICIN
CAPSICIN
CANTHARIDIN
PODOPHYLLIN
HYOSCYAMINE
HOMATROPINE
JALAP RESIN
IRIDIN
ALOID
GINGERIN
LITHIA SALTS
SCAMMONY RESIN

MORPHINE
CODEINE
STRYCHNINE
CAFFEINE
EMETINE
THEOBROMINE
CHLOROFORM

OPIUM
TELA VESICATORIA
VERATRINE
ATROPINE
CHRYSAROBIN
DIAMORPHINE
EMETINE
BISMUTH IODID.
EMP. CANTH. LIQ.
ETHYL MORPHINE
HYDROCHLOR.
ERGOTIN

Goods covered by Dangerous Drugs Acts offered subject to all regulations.

T. & H. SMITH L^{TD}

BLANDFIELD WORKS: 25 CHRISTOPHER STREET: 32 & 34 VIRGINIA STREET
EDINBURGH. : LONDON, E.C.2. : GLASGOW.

'HOECHST'
ORIGINAL PREPARATIONS

Trade Mark **'PYRAMIDON'** Brand

Dimethyl-amino-antipyrine

**ANTIPYRETIC, ANALGESIC,
ANTI-NEURALGIC**

It is of the utmost importance that the original preparations be dispensed, since with it all the pharmacological and clinical experiments were carried out, and to it, in the main, the literature refers.

Obtainable:—

1½ grain tablets in bottles of 20 and 100
5 grain tablets in bottles of 10 and 25
½ and 1 oz. boxes

A. C. HENRY
19 ST. DUNSTAN'S HILL, E.C.3

RASPBERRY VINEGAR

(ARNFIELD)

We are now offering supplies manufactured from this season's fruit and shall be pleased to submit sample and quotation on learning the quantity required.

We guarantee our product

To be made from pure fruit juice and cane sugar without the addition of any artificial flavouring agents or preservatives.

To keep perfectly and remain free from fermentation or deposit.

To meet the requirements of the Food and Drugs Act.

Supplied only in winchesters, carboys and casks.

J. C. ARNFIELD & SONS
LIMITED

Manufacturing Chemists, Wholesale and Export Druggists

STOCKPORT. ESTABLISHED 1786.

Telephone 601 (2 lines).

Telegrams: Chemicals, Stockport.



TRADE **"TWENTY MULE TEAM"** MARK

BRAND

BORAX B.P. Quality
CRYSTAL POWDER

BORIC ACID B.P. Quality
CRYSTAL POWDER

Guaranteed to comply with the requirements of the British Pharmacopœia.

BORAX CONSOLIDATED LTD.
16, Eastcheap, London, E.C.3.

Pyrogallic Acid Gallic Acid

Manufactured by **J. L. ROSE, Ltd.**
At ABBEY ROAD, BARKING, LONDON, E.
Wholesale and Export only.

EXSICCATED SULPHATE OF IRON

Enquiries Solicited.
PERRY & HOPE, LTD., Nitshill, near Glasgow.
Telephone : Giffnock 414 (2 lines). Telegrams : "Perryope, Nitshill."

ESTABLISHED 1772
HENRY'S CALCINED MAGNESIA

Continues to be prepared with scrupulous care, in the greatest chemical purity by
Messrs THOMAS & WILLIAM HENRY, 11, East Street, St. Peters, Manchester.
And is sold in Bottles, authenticated by a stamp bearing their name. Trade Mark, "Henry's Calcined Magnesia."
New York: Messrs. SCHIEFFELIN & CO. William Street. **PRICE 2s 9d** Paris: Messrs. ROBERTS & CO. 5, Rue de la Paix.

Telephone : CLERKENWELL, 1315;

Telegrams : "ETHERMETH, SMITH, LONDON."

ALFRED WHITE & SONS, LTD. (Established 1775)

Manufacturing and Export Chemists

28-31 ALLEN ST., GOSWELL RD., LONDON, E.C.1.

ACIDS (Pure and Coml.)
BISMUTH SALTS
CHLOROFORM
CITRATES

ETHERS (all gravities)
HYPOPHOSPHITES
LIQ. AMMONIA
MERCURIALS

QUININE SALTS
SP. AMON. AROM.
SP. ETHER NIT.
IODINE PREPARATIONS, Etc.

CHEMICALS FOR RESEARCH, ANALYTICAL, PHARMACEUTICAL AND TECHNICAL PURPOSES.

for CASCARA SAGRADA

ask **BERK**

*Export
Speciality*



F. W. BERK & CO. LTD.

106 Fenchurch St., London, E.C.3

Telephone: Avenue 9362 (6 lines).

Telegrams: "Berk, Phone, London."

Works: STRATFORD, E., & MORRISTON, Glam

ACIDS

Sulphuric, Nitric, Hydrochloric,
Lactic, Hydrofluoric, Citric,
Tartaric, Perchloric (puriss.)

CHEMICALS

Quicksilver, Sulphur,
Mercurial Salts, etc., etc.

CRUDE DRUGS

American Botanicals.

TAS/ch.71.

LEVER'S GLYCERINE

*Best for all pharmaceutical and
industrial purposes*

Our chemically pure glycerine is guaranteed to comply with all the
requirements of the Food and Drugs Act and the British Pharmacopoeia

Write for free sample to

LEVER BROTHERS LIMITED
Glycerine Dept., A4, 46 Chancery Lane, London, W.C.2

LG 9-200A

CAPSULES

(CAPULVÆ)

FOR POWDERS, ETC. FILLED OR EMPTY.
IN VARIOUS SIZES AND COLOURS.

SAMPLES AND PRICES ON REQUEST.

*Santrocyl Capsules and Mosan's
Preparations*

JOHN W. MAWSON & CO., LTD.
WEST NORWOOD, LONDON, S.E.27

'Phone—STREATHAM 718.

HOMAS

TYRER

& CO., LTD.

STERLING — BRAND — CHEMICALS

ETHER
CITRATES
BISMUTH SALTS
SCALE PREPARATIONS
HYPOPHOSPHITES
BROMIDES
ACIDS,
ETC.

STRATFORD, LONDON, E.15



Hubbuck's Pure Oxide of Zinc

is made by sublimation, and is
warranted to contain upwards of

99.5 PER CENT.

of pure oxide; in fact, the
impurities are not traceable.

Thos. Hubbuck & Son, Ltd.

ESTABLISHED 1765

24 Lime Street, London, E.C.3.

MANUFACTURERS OF WHITE LEAD, WHITE
ZINC, PAINT, OILS, COLOURS, VARNISHES, &c.

Australian Office: 34 Queen St., Melbourne.

Sold by the following Wholesale Druggists
in Boxes of 7 lb. and 14 lb. stamped by
the Manufacturers; also in 1-lb. Boxes
and 1-lb. Glass Bottles.

Allen & Hanburys (Lim.)	Holkinson, Prestons & King
Ayrton, Saunders & Co. (Lim.)	Horner & Sons
Bell, Jno., & Co.	Huskisson, H. O., & Co.
Bleasdals (Lim.)	Inman's Stores (of Edinburgh)
Boots Pure Drug Co. (Lim.)	Lofthouse & Saltmer (Lim.)
British Drug Houses (Lim.)	Mackay, Jno., & Co. (Lim.)
Burgoyne, Burlidges & Co.	Oldfield, Pattinson & Co.
Butler & Crisps (Lim.)	Pinkerton, Gibson & Co.
Clay, Dod & Co.	Potter & Clarke (Lim.)
Cockburn & Co. (Lim.)	Raines, Clark & Co.
Corbyn, Stacey & Co. (Lim.)	Raines & Co.
Dakin Brothers	Rankin & Borland
Duncan, Flockhart & Co.	Silversides, R. B. G.
Evans, Gadd & Co. (Lim.)	Smith, T. & H., (Lim.)
Evans Sons Leacher & Webb (Lim.)	Southall Bros. & Barclay
Farris & Co.	Summer, R., & Co.
Gale & Co.	Thompson, John, (Lim.)
Glasgow New Apothecaries Co.	Wilkinson & Simpson (Lim.)
Goodall, Backhouse & Co.	Willows, Francis, Butler & Thompson (Lim.)
Harker, Stagg & Morgan (Lim.)	Woolley, Jas., Sons, & Co. (Lim.)
Harkness, Beaumont & Co.	Wright, Layman & Umney (Lim.)
Hatrick, W. & R., & Co.	Wyleys (Lim.)
Hirst, Brooks & Hirst.	

Barry, F. J., New York	McKesson & Robbins, Inc.
Finlay, Dicks & Co., New Orleans	New York
E. Fongers & Co., 90/92 Beekman Street, New York	Muth Brothers & Co., Balti- more
Chas. L. Hulsking, Inc., 5 Platt Street, N. York	Roller & Shoemaker, Phil- adelphia
Lehn & Fink, Inc., N. York	Schiffelich & Co., Inc., New York
	Shoemaker & Busch, Phil- adelphia

Sturgeon Brand Chemicals

CITRIC ACID

CITRATE of POTASH
CITRATE of SODA
FERRI et AMMON. CIT.

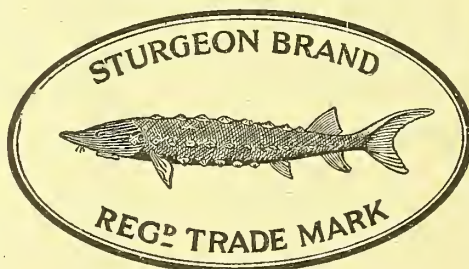
Effervescing
CITRATE of
MAGNESIA
etc.

FLUID
MAGNESIA
LAC MAGNESIA

PRECIPITATED CHALK

CALC. CARB. PRECIP.

for Dentifrice Pastes, &c.



ESTD. 1823

ROCHELLE SALTS

PULV.

SEIDLITZ

TARTRATE of SODA
TARTRATE of POTASH

BICARBONATE of POTASH

CARBONATE of POTASH
B.P.
CREAM of TARTAR

**JOHN & E. STURGE LTD WHEELLEY'S LANE
BIRMINGHAM**

AGENTS:

H. J. BAKER & BRO., 81 Fulton St., NEW YORK
G. REINBOLD & CIE., 63 Rue des Archives, PARIS

CABLES: "STURGEON, BIRMINGHAM"
CODES: A.B.C. 5th & 6th Edns., BENTLEY'S
MARCONI INTERNATIONAL

ABSORBENT
GAUZES.

ABSORBENT
WOOLS.

ABSORBENT
LINTS.

ABSORBENT
TISSUES.

WOOD WOOL.

CARDED
WOOL.

PEAT MOSS.

Surgical Dressings

BANDAGES
OF EVERY
KIND AND
PATTERN.

JACONETS.

SHEETINGS.

BATISTES.

OILED SILKS
& COTTONS.

G.P. TISSUE.

: *Packed to suit your requirements.* :
Special Quotations for Large Quantities.

Carnegie Bros. 227/229 ESSEX RD.,
LONDON, N.1.

Telegrams : "Carnebros, Phone, London."

CORRESPONDENCE INVITED.
WHOLESALE AND EXPORT ONLY.

Telephones : Clissold 3560 & 2318.

Manufacturers of
STRYCHNINE & SALTS
CHRY SAROBIN
and other Fine Chemicals.

Distributors of
SANTONINE PURE CRYSTALS
(in original Russian parcels of 1 Kilo)

WHOLESALE AND EXPORT ONLY

CARNEGIE BROS.

227-229, ESSEX ROAD : LONDON, ENGLAND

Works : Bowes Park, N.13

Cables : "Carnebros, London"

Codes : A.B.C. 5th and 6th Editions, Bentley & Marconi

CONTRACTORS TO H.M. GOVERNMENT

Chemical Works of Gedeon Richter, Ltd., Budapest X.

<u>Extracts</u>	<u>Tablets</u>
steril. and stand. of any strength	of every size coated and not-coated
of	

Organotherapeutical Preparations

Adrenalin, guaranteed to be made from physiologically active suprarenals, Thyroid, Parathyroid, Ovary, Corpus luteum, Orchitic, Pituitary, Pineal, Red Bone Marrow and all other organotherapeuticals.

Substances for working up into finished products
are supplied on request or on special formula.

Lecithin pure and combined with Bromine and Iodine.	Salts of the Acetylsalicylic Acid with Ca, Li, Mg.
--	---

Ask for Special Offer and Samples.

Tablets

Enquiries are invited for
**ASPIRIN AND CASCARA
TABLETS**

IN BULK OR PACKED.

A Customer writes :—"Re Aspirin Tablets.
Your sample was one of the best we have ever
had, we anticipate doing good business with
you if you can maintain that quality."—WE
CAN, AND MEAN TO!!

LET US QUOTE YOU.

CASTLE HUSKISSON, LTD.

Manufacturing Chemists,

Swinton Works, Moon St., Islington, N.1

ESTAB. 1768.

Private formulæ Pills and Tablets carefully and
accurately prepared at lowest possible prices.

Pills

THE BEST HOUSE FOR
**ASPIRIN
CASCARA**
AND ALL TABLETS IN BULK.

Write for samples and prices before buying.
Superior machinery and scientific control.

R. GIBBINS & CO.

1 BIRKBECK ROAD, KINGSLAND, LONDON, E.8.

DUTCH
Sugar
of Milk.
"THE BEST"

**HOLLANDSCHE
MELKSUIKERFABRIEK
Amsterdam**

PURE ITALIAN LIQUORICE

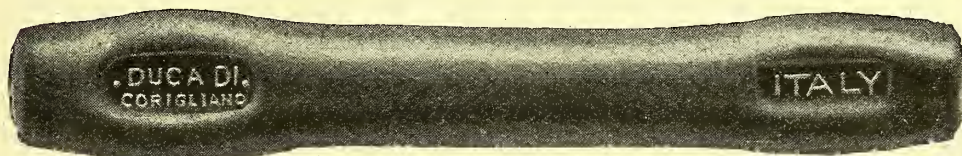
DUCA DI CORIGLIANO

The well known and old established brand.

Pure Extract of ITALIAN (Calabrian) LIQUORICE ROOT

STOCKS HELD IN LONDON & LIVERPOOL

Sizes: 1 oz., 2 oz., and 4 oz.



OBTAINABLE FROM ALL WHOLESALERS

THERE IS ALWAYS A DEMAND FOR

SUGAR COATED PILLS

MADE BY

PARKINSONS

It Pays to Stock Them.

Trade Enquiries Solicited.

PARKINSONS

MANUFACTURING
CHEMISTS

BURNLEY

BEST IN 1914 AND STILL ON TOP.

P.M. ASPIRIN B.P.

**THE ORIGINAL
BRITISH MAKE.**

is still the best for every purpose, and is supplied in crystal, powder,
or the granular form preferred by some tablet makers.

P.M. SALICYLIC ACID PASSES ALL TESTS.

Home and foreign buyers should ask for samples and prices.

PIERSON, MORRELL & CO., LTD. (*The Original British Aspirin Makers*),

Telephone No.:
Barnet 0723.

100, QUEEN'S ROAD, BARNET.

Telegrams and Cables:
"Pierson Morrell, Barnet."

Compound Syrup of HypophosphitesTRADE **"FELLOWS"** MARK

Compound Syrup of Hypophosphites "FELLOWS," in addition to being in constant and increasing demand, adds distinction to a chemist's show window. It is a symbol of progressiveness and reliability.

Tablets Laxative "FELLOWS"*"The Tablet With a Pedigree"*

IN TWO SIZES, NAMELY:

LARGE BOTTLES
(Containing 100 Tablets)

SMALL BOTTLES
(Containing 40 Tablets)

Fellows Medical Manufacturing Co., Inc.

26 Christopher Street

New York City, N. Y.

LABORATORIES:

Mexico City, Mexico; Montreal, Canada; Paris, France; Milan, Italy;
Barcelona, Spain; Berlin, Germany.

TESTOGAN

FOR MEN.

THELYGAN

FOR WOMEN.

*A Proven Efficient Remedy
(Formula of Dr. Iwan Bloch)*

INDICATED IN

**Impotence and Insufficiency
of the Hormones.**

YOHIMBIN TABLETS & AMPOULES**BISMOLAN SUPPOSITORIES AND OINTMENT.** For the Treatment of Hemorrhoids.

For literature and other information apply to
CAVENDISH CHEMICAL CORPORATION
175 PICCADILLY, LONDON, W.1.

BUTLER & CRISPE, *English Distributors*
MAY, ROBERTS & CO., Ltd., *Irish Distributors*
16 Westmoreland Street, Dublin.

Iglodine.

Can you say "Yes" when IGLODINE is requested?

IGLODINE is being advertised. The unflinching effectiveness of its action is going to make trial purchasers into IGLODINE enthusiasts. Every Chemist should be prepared to supply IGLODINE—a dependable antiseptic, quick-selling and profitable.

*Write for fullest particulars and terms—***The IGLODINE Co., Ltd., Pilgrim St., Newcastle-on-Tyne****ERGOAPIOL (Smith) PROTECTIVE MARK**

Patented in U.S. and Foreign Countries.

Ergoapiol (Smith) is now identified by the letters M.H.S. in the gelatin on the inside of each capsule. These letters are not visible from the outside, but they are plainly discernible in the gelatin when the capsule is cut in half.

MARTIN H. SMITH CO. NEW YORK, N.Y.

British Agents—
THOS. CHRISTY & CO., 4-12 Old Swan Lane, London, E.C.4

"GÜSTROW" PHARMACEUTICAL SPECIALITIES

YOHIMBINE SPIEGEL. *The alkaloid of Yohimbine bark.*

MENOLYSIN. *Yohimbine Spiegel for gynæcological practice.*

MENOLYSIN COMPOSITUM. *Each tablet contains 0.005 gramme Yoh. hydr. Spiegel and 0.03 gramme codeine phosphate.*

OPSONOGEN. *Polyvalent Staphylococcus Vaccine.*

BACILLOSAN, according to Dr. Loeser. *Lactic acid bacilli of a pure culture from active strains of Bact. lact. aerogenes.*

Y-STROPHANTHIN "GÜSTROW." *Crystallised chemically pure gratus-Strophanthin.*

EUGUFORM. *Condensation product of Guaiacol and Formaldehyde.*

CALOROSE. *Sterile invert sugar solution for subcutaneous and intravenous administration.*

EKTOBROM. *10% NaBr solution in isotonic Calorose solution.*

NEKROLYSIN. *Apathogenic, proteolytic organisms.*

Aphrodisiac; nerve tonic.

Amenorrhœa, Dysmenorrhœa, and diseases associated with the climacteric.

Increased potency in Dysmenorrhœa.

Furunculosis and all other Staphylococcoses.

All forms of non-gonorrhœic fluor albus.

Heart tonic; acute threatening cardiac weakness, subacute and chronic cardiac insufficiency. Prophylactic prior to operations.

Wound dusting powder.

All indications for grape sugar.

Eczema, erythema, acute psoriasis and similar skin affections.

For treatment of chronic fistulas.

Extensively advertised to the Medical Profession.

Chemische Fabrik Güstrow A.-G. Güstrow i.M. (Germany)

PRICE LISTS, etc., ON REQUEST FROM SOLE CONCESSIONAIRE:

H. W. BRAUN, 16 Water Lane, Great Tower Street, LONDON, E.C.3

**Wessanen's Cocoa
Butter No. 1**

**Wessanen's Edible Oils
Refined Cocoanut Oil**

Sales Office:

COCOA MILLS WESSANEN,
12 Broom Lane, Broughton Park, Manchester.

**HAVE you a SPECIALTY
SELLING WELL IN ENGLAND?**

And would you like to introduce
it to **AMERICA**

Either on a profit-sharing basis or
straight agency plan?

SEND FULL PARTICULARS

REPRESENTING
ENGLISH FIRMS.
"REFERENCES"

T. A. HEDLEY
53 PARK PLACE, NEW YORK

QUININE

**QUINIDINE
CINCHONINE
CINCHONIDINE**

Sugar-coated Quinine Tablets and Pills.

**BANDOENG
JAVA**

Telegrams: "Kininefabrik Bandoeng."

BANDOENG QUININE FACTORIES

Samples, prices and particulars on application.

and

SALTS

Gelatine-coated Oval Pills.

**AMSTERDAM
De Wittenkade 48-59.**

Telegrams: "Semadmy Amsterdam."

Petrol agar

(DESHELL)

FORMULÆ

- PLAIN (No. 1)
PHENOLPHTHALEIN (No. 2)
ALKALINE (No. 3)
UNSWEETENED (No. 4)

The Quality EMULSION
of 65% B.P. Liquid
Paraffin and Agar-Agar

STOCKED BY YOUR WHOLESALER.

The ANGLO-FRENCH DRUG CO., Ltd.

238a GRAY'S INN ROAD, LONDON, W.C.1.

Telephone: MUSEUM 4029.

Telegrams: "AMPSALVAS, LONDON."

*Manufacturers of high-class Pharmaceutical Preparations,
extensively used and prescribed by the Medical Profession.*

ORGANO-THERAPEUTIC PRODUCTS

The glands from which our total extracts are prepared are collected daily from the Paris Abattoirs, desiccated in Vacuo at Zero C., clinically and biologically controlled and manufactured into "Opocrins" (dragees) and into extracts for hypodermic injection under strictly aseptic conditions.

"OPOCRINS."

Dragees of all single glands and in many pluriglandular formulas. Perfect preservation and constant activity is assured.



ENDOCRINE AMPOULES A.F.D.

Injectable extracts of single gland and pluriglandular formulas ready for injection.

ELECTRIC COLLOIDS

ORARGOL
COLLOIDAL
GOLD & SILVER

SPECIFIC FOR SLEEPY SICKNESS.

"A case of Encephalitis Lethargica of Severe Type Treated Successfully by Injections of Electro-colloidal Gold and Silver."—By ARTHUR W. FULLER, M.D.

THE LANCET, July 24, 1926.

NEW SPECIAL PREPARATIONS

MYCOLACTINE

A combination of Bile Extract, Yeast and Lactic Ferments for use in Constipation.
2/- per bottle of 50 Tablets.

DIGLOBIN

Epiphyseal Bone Marrow and Spleen Extract for use in Anæmias.
3/- per bottle of 60 Tablets.

HOMOVIR

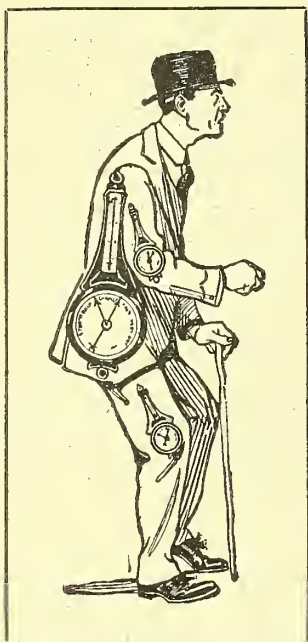
A Gland product for use in Impotency, Neurasthenia, etc.
4/- per bottle of 50 Tablets.

IODOBESIN

Pluriglandular Total Extracts with Iodalbumen, a cure for Obesity.
4/- per bottle of 60 Tablets.

LIBERAL DISCOUNTS AND FREE DELIVERY TO THE RETAIL TRADE.

Of special interest for your prescription service.



WRITE FOR PARTICULARS
OF CASH BONUS FOR
WINDOW DISPLAY

It does not matter where the Barometer is

CURICONES

will deal with the trouble, be it

**Rheumatoid Arthritis, Neuritis,
Rheumatism, Gout, Lumbago
or Sciatica.**

Quick Sales.

WELL ADVERTISED.

Generous Terms.

RECOMMENDED BY DOCTORS.

Stocked by all Wholesale Houses.

Other Lines which also pay to stock:—

ANTHROIDS BALM, CURILAX, VICAPS, STEMAT ANTI-CATARRHAL TABLETS, STEMAT ANTI-CATARRHAL BALM, My Lady's ROLETTE WRINKLE ERADICATOR, SANALVE, THE QUOPAD MASSAGE APPLIANCE, VANITY BOXES, &c.

STEPHEN MATTHEWS & CO. Ltd.

Manufacturing Chemists,

19-20-21 FARRINGTON STREET, LONDON, E.C.4.

'Phone: City 8342.

Wires: "Curicone, Cent, London."

"HARROWER"

GLANDULAR PREPARATIONS

are the product of a Laboratory which deals with nothing else. They are "specialties" in the best sense of the word. Hence their value.

Price List & complete details on request to:

ENDOCRINES, LTD.

Sole Distributors for The Harrower Laboratory,
72 WIGMORE ST., LONDON, W.1

*Acidophilus
Therapy*

B. ACIDOPHILUS - EMULSION

(MORGENSTERN)

A concentrated, stable, homogeneous and palatable emulsion
of

B. ACIDOPHILUS

(about 250 millions per c.c.)

AGAR-AGAR, PETROLAT. liq. (heavy), SACCH.,
flavouring

Indicated in Constipation, Intestinal Stasis with
Chronic intestinal putrefaction, etc.

E. H. SPICER & Co., Ltd.

72 WIGMORE STREET, LONDON, W.1

*Get your stocks ready for the
coming season of*

"MENTHELLS"

(TRADE MARK)

and for all seasons of

"DIGESTELLS"

(TRADE MARK)

BLYTON, ASTLEY & CO.

PHARMACEUTICAL CHEMISTS

Lower Broughton

MANCHESTER

Telegrams :
"Troches, Manchester."



Commencing next week
Lobelline advertisements
will be appearing in:

"Daily Mail"
"Daily Express"
"Daily Chronicle"
"John Bull"
"Empire News"
"Weekly Dispatch"
"Thomson's Weekly News"
"Birmingham Mail"
"Birmingham Despatch"
"Birmingham Mercury"
"Leicester Mail"
"Leicester Evening Post"
"Yorkshire Evening News"
"Yorkshire Daily Post"
"Lancashire Daily News"
"Balton Evening Telegraph"
"Northern Daily Examiner"
"Huddersfield Examiner"
"South Wales Echo"
"South Wales Express"
"South Wales Argus"

Big National Advertising will create record demand!

Our gigantic advertising campaign will create a record demand for Lobelline! Are you ready to meet it?

WRITE NOW FOR GENEROUS TRADE TERMS OF
THIS WELL ADVERTISED PROFITABLE LINE.

Bottles 1/3, 3/-, 5/-
P.A.T.A.

GEE'S

Lozenges 1/3 & 3/-
P.A.T.A.

LOBELLINE

BRITAIN'S BEST COUGH CURE

Sole Proprietors:

SQUIRE & CO. Birmingham Ltd.
STIRCHLEY LABS., BIRMINGHAM

BELTONA

The New Treatment for Rheumatoid Arthritis, Rheumatism, Neuritis, Sciatica, Lumbago, Gout, Colitis and all Inflammatory Conditions.

We continue to receive astounding testimony of the efficacy of Beltona Treatment, the following are particulars of a case recently brought to our notice:—

A Lady suffering with Rheumatoid Arthritis was advised by her doctor to go and have her hip X Rayed at ——— Hospital. She did so, and was told that her hip would never move again owing to severe Arthritic Condition. For more than two years she could only move with difficulty, and suffered terrible pain. Seeing one of the Beltona Advertisements she decided to give it a trial, and to the astonishment of her doctor the hip is now free and she is able to walk. (This case is only one of hundreds of which we can give positive proof.)

We solicit your help in making Beltona more widely known, if you are not already stocking write to us for particulars of our display parcel, it will pay you handsomely.

STOCKED BY ALL THE PRINCIPAL WHOLESALERS.

Sole Proprietors:

BELTONA LTD. - HODDESDON, HERTS.

SPECIAL NOTE.—We have recently opened a Clinic at 20 Queen St. Mayfair, London, W., for demonstration and advice, and shall welcome a visit from you and your friends.
Phone: Grosvenor 1334.

Notice of Reduction in Price of
EVANS' Throat PASTILLES

*From October 1st, 1926, a new
style of packing is adopted and the
price in Gt. Britain is reduced to*

Per 1/- Tin

Wholesale price 9/- doz.
net. Stocks on hand of
the old kind will be
exchanged pro rata if
returned to us direct.

A wide advertising
campaign in the
National Press starts
at once. Special bonus
terms for Window
Display on application.

Evans

EVANS SONS LESCHER & WEBB, LTD.
LIVERPOOL & LONDON

POISONS and PHARMACY ACT.

Privy Council Order, Jan. 1, 1921.

DANGEROUS DRUGS ACT, 1920.

Regulations of May 20, 1921. (Operative Sept. 1, 1921.)

**Dr. J. Collis Browne's
CHLORODYNE**

is not affected by above Order or Regulations.

It does not require purchaser's signature.

Proprietors: J. T. DAVENPORT, Ltd., 83/87 Union Street, S.E.1.

Get Ready for a big Winter Trade

EXTRACT OF MALT & COD LIVER OIL

We are in a position to quote specially low prices for winter's contract—packed or in bulk.

CREAM EMULSION of Cod Liver Oil with Hypophosphites

A perfect Emulsion. Palatable and Creamy.

GLYCERINE, HONEY & LEMON COUGH BALSAM

WHITE PINE COUGH SYRUP

Both most effective cough cures—and very attractively packed.

B.P. LINIMENT

For Lumbago, Rheumatism, Sciatica, etc. Will ensure many grateful customers.

"MOLIVENE"

Extract of Malt and Olive Oil—sells all the year round. Once introduced, makes recommending a pleasure.

Let us quote you for any and every winter requirement. Sample cheerfully mailed. Send for Illustrated Catalogue.

ROBERT BLACKIE, Sole manufacturer & proprietor of world-famed "SPUN" OINTMENTS (Regd. Trade Mark)
SHEN WORKS, TOWER BRIDGE ROAD, S.E.1

WORTH A GUINEA A BOX.

Beecham's Pills

HOME PRICE LIST

Beecham's Pills:

1s. 3d. size	-	11s. 9d. per dozen
3s. 0d. "	-	28s. 0d. "
5s. 0d. "	-	54s. 0d. "

Less 2½% Cash Discount.

A further 5% allowed for Window
or other Advertising display.

Orders: Minimum quantity £5 value (Assorted sizes).

PACKAGES FREE. CARRIAGE PAID.

TERMS: CASH WITH ORDER.

Cheques to be made payable to THOMAS BEECHAM,
and crossed "Westminster Bank, Ltd., St. Helens."

THOMAS BEECHAM, ST. HELENS, LANCs.

(Proprietors: Beecham Estates and Pills, Ltd.)

'YADIL'

Display it on your counter

Month by month the sales are increasing for 'YADIL,' the great internal and external Antiseptic.

Place a few bottles on your counter and in your window and test it for yourself.

See that you have a supply with the new labels—BLUE for Medical and GREEN for Veterinary.

Order through your Wholesaler now. If any difficulty write direct, and we will see you are supplied.

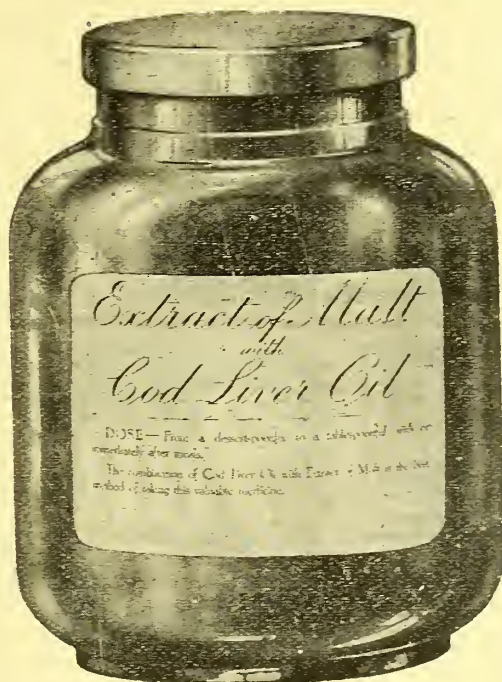
YADIL PRODUCTS (1925) LTD.

Sicilian House, Sicilian Avenue, LONDON, W.C.1.
Telephone: Holborn 1471.



Highest obtainable quality ;
Wide choice of labels ;
 (OWN NAME perfectly printed in)
Remarkably low prices ;
 are some of the reasons why
 you should let us quote you for

MALT and OIL



WILL you be good enough—in your own interest and ours—to ask us to send you quotations before you buy? We offer a wonderful range of labels (specimens sent with quotation), and the best-grade, best-looking Malt Extract at a price that will enable you to compete with anyone.

*Send us a
card to-day.*

GOODALL, BACKHOUSE & CO., LEEDS

**Let Goodall's
quote.**

CLARKE'S BLOOD MIXTURE & OTHER PREPARATIONS

Wholesale Prices.

	SIZES.	PRICE PER DOZEN.
Clarke's Blood Mixture	3/- & 12/-	£1:7:0 & £5:8:0
„ Miraculous Salve	1/3, 3/- & 5/-	11/-, £1:7:0 & £2:4:6
„ Special Aperient Pills ..	1/3, 3/- & 5/-	11/-, £1:7:0 & £2:4:6
„ Patent Skin Lotion ..	1/3	11/-
„ Medicated Soap	1/-	9/-

Orders: Minimum quantity £16:4:0 value.
FREE CASES. Carriage paid upon orders of £100.

All Wholesale Houses keep a large stock of our Preparations and can supply smaller orders promptly.

Minimum Retail Selling Prices: 1/-, 1/3, 3/-, 5/- & 12/- Face Value, giving a **PROFIT** of 33 $\frac{1}{3}$ % on cost to Distributors.

An attractive Showcard and Dummies supplied on application.

Trade Mark: "BLOOD MIXTURE." Regd. No. 3275.

Sole Proprietors:

THE LINCOLN & MIDLAND COUNTIES DRUG CO., LTD.
Park Street, LINCOLN.

ALL CHEMISTS
SHOULD STOCK

ABDINE

THE GOLD MEDAL HEALTH DRINK.

Quick Seller. Big Profits. Over 50 years' Reputation.
"Abdine" is the most popular Health Drink. Perfectly safe for all ages.
Made from choicest fruits, it does not contain Epsom or Glander Salts. Year
after year the sales are steadily increasing.

DUNCAN McGLASHAN, LTD., ABDINE WORKS, WESTFIELD RD., EDINBURGH



PRICES OF CACHETS
REDUCED

2/- per 1,000 all sizes and series

Carriage Paid on 5,000.

Special Quotations for Quantities.

Phone: PARK 116. **CICERO S. CLARK,** 19 RICHMOND ROAD,
LONDON, W.3

**FORCEFUL
ADVERTISING**
Keeps Your Sales Up!

ESTABLISHED OVER 60 YEARS

**PERRYS
POWDERS**

FOR CHILDREN'S AILMENTS



Wholesale from **PERRYS POWDERS, Ltd., LEEDS**

DR. BOW'S
LINIMENT.
Prepared by his Great-Great-Grandson



(J. D. R. BOW, Managing Director.)

RETAIL 3/-

The Gothic window and the name "DR. BOW'S LINIMENT" are Registered Trade Marks and appear on every bottle. Anyone using the name or any similar name is liable to be proceeded against.

The above label in Blue appears on outside wrapping.

DR. BOW'S LINIMENT, Ltd.

Works—7 South Gray St., Edinburgh.
Registered Office—3, 4 & 5 Queen St., Cheapside, London, E.C.4

You take no risks

with these two best sellers



THE popularity of Dr. Cassell's Tablets and Germolene is greater than ever. Sales are constantly increasing. Why?

- (1) Because they possess merit and meet a public need.
- (2) Because they are backed by the most comprehensive and most powerful selling scheme ever promoted.

Our advertising is an insurance against slow-moving stock. You take no risks.

Your profits will mount and more custom will cross your doorstep if you display these two fast sellers.

Veno Products Build Business

Send for price list and terms of Window Displays

The VENO DRUG CO. (1925) Ltd.

Telephone Nos. :
TRAFFORD PARK 496-497
(Two lines).

Manufacturing Chemists
Chester Rd., Manchester, Eng.

Telegraphic Address :
"SEAWEED."
MANCHESTER.

Efficient Display
NEW
"STAND-SHOWCARD"

NO STRUT NO GLUE
Patented

Cut in one piece.
Self-fixing.
Pack flat.

YOUR CARDS WILL
BE USED — YOUR
GOODS DISPLAYED.

OVER 1,000,000 USED BY
LEADING MANUFACTURERS.

Phone: Clerkenwell 4283. Patentees & Makers.
The SHOWCARD SPECIALISTS
115 OLD STREET, LONDON, E.C1

Send for Particulars

WESTMINSTER COLLEGE OF PHARMACY

190 Clapham Road, London, S.W.9

**COURSES FOR PRELIMINARY
SCIENTIFIC (Part I) and
QUALIFYING (Part II) EXAMINA-
TIONS WILL COMMENCE ON
OCTOBER 6, 1926.**

LONDON COLLEGE OF PHARMACY

(FOUNDED BY H. WOOTTON, B.Sc.)

C. W. GOSLING, Ph.C.

Principal—W. F. GULLIVER, Ph.C.

Courses of Instruction provided for

MINOR EXAMINATION

DAY, EVENING AND PART-TIME CLASSES.

Benches are now being reserved for session 1926-27,
which commences on OCTOBER 6th.

Apply—THE SECRETARY, 361 Clapham Rd., LONDON, S.W.9

Liverpool School of Pharmacy

2 BLACKBURN PLACE, LIVERPOOL.

Principal—

H. HUMPHREYS JONES, A.I.C., F.C.S., Ph.C.

Courses of Instruction are given in preparation
for the Preliminary Scientific and Qualifying
Chemist and Druggist Examinations of the
Pharmaceutical Society.

NEXT SESSION COMMENCES OCTOBER 1926.

Students can be booked now.

Full particulars from Principal.

THE BATH AND WEST OF ENGLAND COLLEGE OF CHEMISTRY & PHARMACY

Principal: D. J. WILLIAMS, B.Sc. (Hons.) Lon., Ph.C., F.C.S., F.S.M.C.

—: £90 :—

Won by Correspondence Students *this year*
at Scholarships.

£300 in all won by Students in this department.

For particulars of Courses

Apply: The Secretary, 5 and 6 Cleveland Place, E. BATH.

MANY SUCCESSES IN THE EXAMINATIONS

Your Opportunity to

QUALIFY IN OPTICS

PRACTICAL WORK. Students taking the course
may receive personal tuition in the practical work
AT ANY TIME DURING THE COURSE.

Expert Tuition for the SIGHT-TESTING DIPLOMAS of the Worshipful
Company of Spectacle Makers (F.S.M.C.); the British Optical Association
(F.B.O.A.); the National Association of Opticians (F.N.A.O.);
or the College of Optics (F.C.O.).

Write for full particulars—

G. A. SCURR, M.P.S., F.S.M.C., F.B.O.A., F.N.A.O., B.Sc., F.I.O., F.C.O.
50 HIGH STREET, BARNET, LONDON, N.

S.A. Representative: E. E. G. WOOLLEY, F.S.M.C., M.P.S., o/o H. Neil & Co.
215 Bree St., Johannesburg.

N.Z. Representative: R. C. AITCHISON, Box 168 PALMERSTON, North.

AIDS FOR THE DEAF

We offer Chemists a unique and very remunerative
proposition.

NO STOCK NECESSARY.

NO OBLIGATION WHATEVER

BY ASKING FOR PARTICULARS.

Write now on your letter heading—

THE ACOUSTIC SUPPLY CO., LTD.,
3-4, EDEN STREET, LONDON, N.W.1.

Manufacturers and Sole Wholesale Distributors of all types of
acoustic appliances.

The Magnets that bring
people back for MORE—

Illingworth's

BROMIDE

AND SLOGAS PAPERS

Bromide

—the paper which, after 26 year's intensive research, cannot now be bettered. Recommend it with the greatest confidence to your amateur friends and it will never let you down. Every grade of surface available and each a veritable achievement in manufacture.

Slogas

—the paper which is the outstanding success of the Trade—the paper which gives the veriest tyro such uniformly good results that his enthusiasm is increased and he becomes a better customer than ever. Did you ever think of that.

Help to make Photography a winter hobby, and push the Fast Film in The Bright Blue Box. Let us send you some attractive showcards and dummies.

THOMAS ILLINGWORTH & CO. LTD., Park Royal, Willesden Junction, N.W.10

WE GIVE THE FINEST QUALITY
VELOX D. & P. SERVICE.

PER RETURN OF POST

POSTCARD ENLARGEMENTS

2/- for 1 doz. 1/3 for 1/2 doz. 3d. for single.
OFF ONE NEGATIVE.

Special lines in cheap enlargements with show material.
Unique advertising scheme. Write for list & particulars.

A. J. SHAWYER & CO.

12 WOOD STREET - SWINDON, WILTS.

IMPORTANT

FOR D. and P. and Enlarging

Here's a wonderful service. Quick enough for delivery same day if desired, with highest standard of work. Many notable dealers testify to the satisfaction received.

Write to-day to
**PHOTOPRESS, Johnson's Court,
Fleet Street, LONDON, E.C.4.**

WE SPECIALISE IN

OVERALLS

FOR

ALL TRADES AND PROFESSIONS

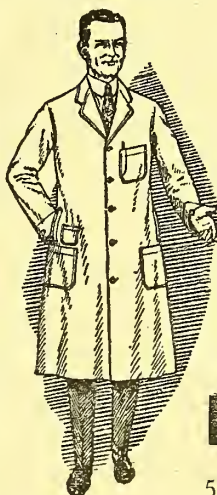
(EVERY GARMENT
GUARANTEED)

White Drill Jackets from 6/6
White Drill Coats „ 8/11
Khaki Drill Coats „ 10/6
Black Drill Coats „ 12/6
Grey Drill Coats „ 12/6

LARGE VARIETY of STYLES
and SIZES Always in Stock
for Immediate Wear.

ANY STYLE OF GARMENT
MADE TO ORDER.

Illustrated Catalogue Free
on request.



BREWSTERS

(FORMERLY PECKS)

53 & 55 BYROM STREET,
LIVERPOOL.

SPECIAL QUOTATIONS for LARGE QUANTITIES

HARVEY'S

Watts' Embrocation, or Curb Bottle.
Aconite Powders.
Worm & Condition Powders.
Watts' Red Lotion.
Hair-Restoring Ointment.
Edos, or Tasteless Purging Powder.

HARVEY'S**Great**

Protected Prices
(P. A. T. A.)

Remedies for the Horse**HARVEY'S**

Koppos Powder.
Parasiticide.
Thrush Specific.
Hoof Ointment.
Hair Restorer (Human).

Of all the leading Druggists' Sundries Houses
HARVEY & COMPANY, Ltd., Dublin

Chemists!*Get to know this name.*

The certain control
for all plant, soil
and vermin pests.

Full details of the
properties and uses
of CYANO GAS,
together with full
details of liberal
Trade Terms and
bonus offer, will
be gladly sent on
request to
THEODORE

PARKER,
Technical Adviser.

SPECIAL NOTICE

Owing to postal difficulties coupled with
delay in Rail Transport, we have made
arrangements with a Special Distributing
Agency to deliver all supplies of Cyanogas
and other poisonous Insecticides.

This arrangement will ensure the material
being delivered within 2 to 3 days of
receipt of the order, and we trust will
greatly eliminate many irritations which
must have occurred as a result of present
transport conditions.

Geo Monro Ltd
SUNDRIES DEPARTMENT
WALTHAM CROSS HERTS.

Sole Distributors for FUMIGATORS SUPPLIES LTD.,
233 SALISBURY HOUSE, LONDON WALL, E.C.2

**Cataline prevents and cures inflammatory
Diseases in Cattle.**

TO THE TRADE.**P.A.T.A. PRICES!***Are you stocking***CATALINE ?**

If not, now is the time to send us your orders.

During this month we are posting 200,000 circulars to 200,000
Farmers and all Live Stock Owners.
Many of these are your customers.

They will be asking YOU for CATALINE.

Cataline Pleases Your Customers *The Sales will Please You*
IS
WHAT CATALINE YOU
WANT

Cases Free. Carriage Paid.

Our best cash with order, carriage paid, prices are:—
1 dozen 3 dozen 6 dozen 12 dozen
36/- 35/6 per doz. 35/- per doz. 34/6 per doz.

Stocked by most Wholesale Houses

THE CATALINE CO., BRISTOL
and DUBLIN.

**Continuous and Steadily Advertised Goods
FOR DESTROYING RATS AND MICE**

DANYSZ VIRUS

Retail Price (protected).	Net Wholesale Prices
Virus for Rats and Mice, single tube, 2/-	15/- per doz.
3 tubes, 5/-	
Virus for Mice only - single tube, 1/6	9/- " "
3 tubes, 3/-	

Date-expired tubes returned to us postage paid will be exchanged
free of charge.

Danysz Virus in Liquid Form

Retail Price.	Wholesale Price
Quart Bottles 6/- each	4/6 each
Pint " 4/6 "	3/9 "

**HALLER'S EXTRACT OF SQUILL
and DANZO RAT KILLER**

Discount off Retail Prices 25% Monthly Account, or 33% cash
with order.

	Retail	Monthly a/c	Cash with order
1/2 gall. tins	10/-	7/6	6/8
1 " "	18/-	13/6	12/-
5 " "	80/-	60/-	53/4

DANZO BEETLE POWDER

For destroying Blackbeetles, Cockroaches, Crickets, &c.
Retail Prices (protected). Wholesale prices per doz.

In tins 3d.	In boxes of 2 doz. 2/1
" 6d.	" 1 " 3/8
" 1/-	" 1 " 7/3
" 2/6	" 1 " 18/-

Danzo Beetle Powder will not deteriorate by keeping.
CARRIAGE PAID ON ALL ORDERS.

To be obtained from
HALLER LABORATORIES, LTD.
325, Borough High Street, LONDON, S.E.1

Telegrams: "Virudana, Sedist, London."

Telephone: Hop 2717

PHOSFERINE

New Window Display Conditions

Monthly Account.Carriage Paid.

For a small Central Window Display of not less than 14 days and an order for £5 worth of Phosferine we allow a bonus of 10/6, on a £2 10 0 order 5/3.

This shows a net profit on the transaction to the Chemist of 35%, besides attracting the passer-by to the window and considerably augmenting sales generally.

Should a £5 or £2 10 0 parcel not be required, any smaller quantity will be forwarded carriage paid, and can, if desired, be regarded as part of the £5 or £2 10 0 order. On completion of the order and a notification that the display is in progress the bonus will be allowed.

The above conditions apply only to the United Kingdom.

EXAMPLE.

		COST	SELLS FOR
3½ dozen 1/3 size at 12/- net	....	£2 2 0	£2 12 6
2 " 3/- " at 30/- "	....	3 0 0	3 12 0
		5 2 0	
Less 10/6 for Window Show	....	10 6	
		£4 11 6	£6 4 6

Showing a Net Profit of £1 13 0 on an outlay of £4 11 6.

Window Display Material Free and Carriage Paid.

WHOLESALE PRICES OF PHOSFERINE.Carriage Paid.Monthly Account.

1/3 size	....	12/- per doz. net.
3/- "	....	30/- " "
5/- "	....	48/6 " "
12/- "	....	114/- " "

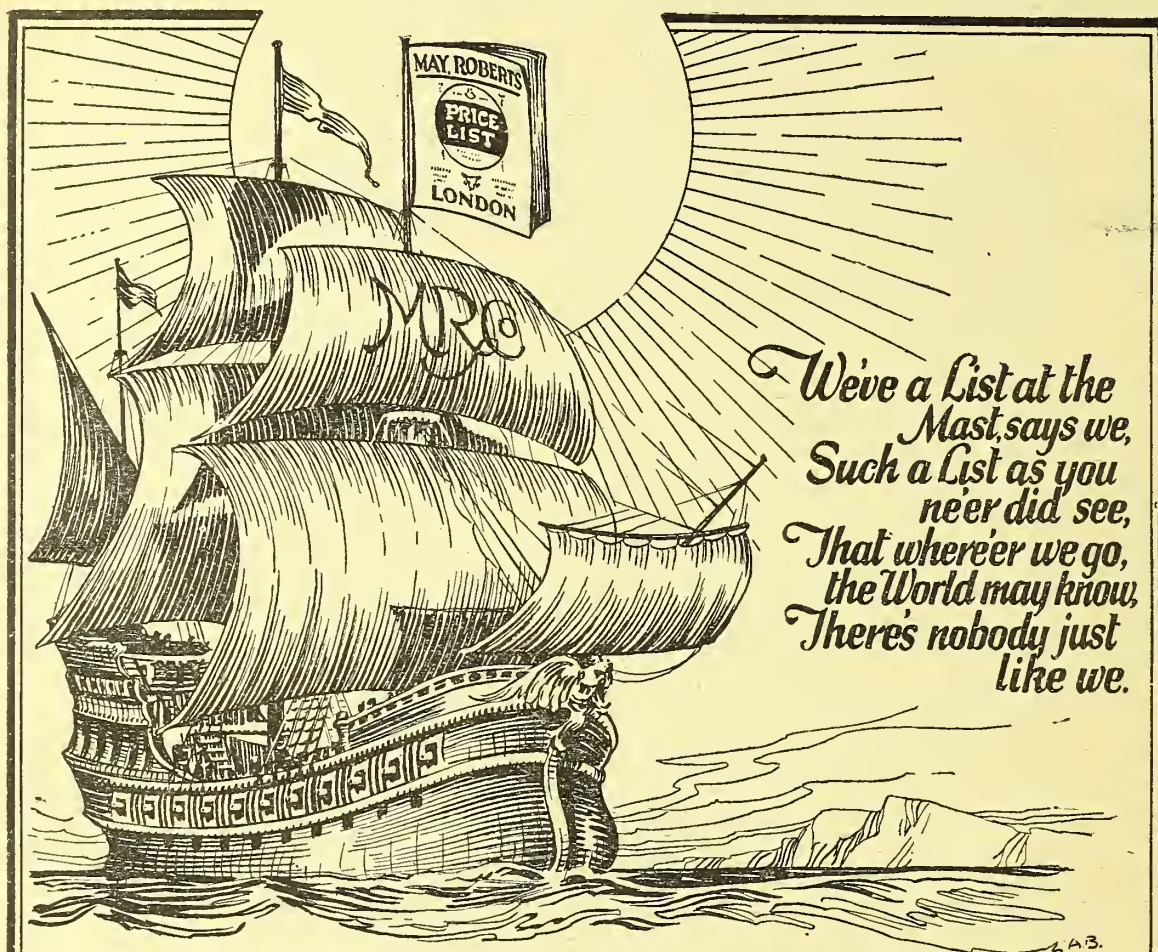
PROTECTED PRICES.

Phosferine and all of our Proprietary Medicines are supplied on the condition that they are not retailed in the United Kingdom under the following prices—viz., 1/3, 3/-, 5/-, and 12/-.

ASHTON & PARSONS, Ltd., Ludgate Hill, LONDON, E.C.4.

Telephone No.: CITY 8733. Telegraphic Address: "PHOSFERINE, CENT, LONDON."

IMPORTANT.—Every care is used in corking and packing Phosferine, but occasionally a leaky bottle will pass undetected. Any leaky or faulty bottle should be returned to Ashton & Parsons, Ltd., Ludgate Hill, London, E.C.4, when a fresh supply will be sent and postage refunded.



OUTWARD BOUND

May, Roberts Catalogue is out again and a copy is at your disposal, if you will write for it now.

The Sundries & Packed Goods Sections are very fully illustrated, while the Proprietaries' Section gives an almost exhaustive list of Patent Medicines, Food etc. It is the Retail Pharmacists' Buying Guide, and it is

Yours for a Postcard!

MAY, ROBERTS & CO. LTD

7-13, CLERKENWELL ROAD, E.C.1.

P.O. BOX 157

Also at LIVERPOOL, PLYMOUTH and DUBLIN.

THE CHEMIST AND DRUGGIST SUPPLEMENT

42 CANNON ST.
LONDON E.C.4

SEPTEMBER 25, 1926

This Supplement is inserted in every copy of The Chemist & Druggist.

THE CHEMIST AND DRUGGIST SUPPLEMENT

REVISED ADVERTISEMENT TARIFF.

Businesses Wanted and for Disposal, Premises to Let, Goods for Sale, and Agencies—6/- for 50 words; every additional 10 words or less, 6d.

SITUATIONS OPEN—6/- for 40 words; every additional 10 words or less, 6d.

SITUATIONS WANTED—2/- for 18 words; every additional 10 words or less, 6d.

Legal Notices, Tenders, Auctions, and all specially-spaced announcements, 1/3 per nonpareil line (12 lines = 1 inch single column).

Miscellaneous (Wholesalers') Section for odd and second-hand lots—10/- for 60 words; 1/- for every additional 10 words or less.

EXCHANGE COLUMN (for Retailers, etc.)—Twopence per word, minimum 2/-.

BOX NUMBER.

In each case replies may be addressed to a registered number or nom-de-plume, c/o this Office, at a charge of 1/- extra for each advertisement.

PAYMENT.

All Advertisements are prepaid, so that remittance must accompany instructions in each case. If it be necessary to telephone or telegraph an urgent announcement this may be done, provided the money is telegraphed at the same time.

THE CHEMIST AND DRUGGIST, 42 Cannon Street, LONDON, E.C.4.

Telephone: Central 3517 (3 lines).

Telegrams: "Chemicus, Canuon, London" (2 words).

CLOSING FOR PRESS.

MUST REACH US
NOT LATER THAN

FIRST POST

**ALL ADVERTISEMENTS INTENDED FOR
INSERTION IN THIS SUPPLEMENT**

THURSDAY MORNING.

CHEMISTS' TRANSFERS.

Messrs. Orridge & Co., 56 Ludgate Hill, E.C.

Telephone No.: CITY 2283.

May be consulted at their Offices on matters of Sale, Purchase and Valuation.

1.—**LONDON, W.**—Light Retail, Dispensing and Photographic Business; established many years; returns £2,500 per annum; gross profit 40 per cent.; double-fronted shop; good working stock; six-roomed house, bath-room; moderate rent; lease 16 years unexpired. Further details on application.

2.—**WEST END.**—Ready-money Business; returns £1,650 at very good prices; books audited; double-fronted shop; attractive fittings; good working stock; held on lease; price £1,250; £850 oh entry and balance by instalments.

3.—**ILFORD (Near).**—General Retail and Dispensing Business; returns between £20 and £25 weekly, increasing; attractive double-fronted shop, well fitted and stocked; long lease; rent £75; price £760, or near offer.

4.—**LONDON SUBURB (Main Road).**—General Retail Business, with Kodak Agency; returns about £2,000 per annum at good prices; double-fronted shop; held on lease at moderate rental; price £1,250, or valuation terms entertained.

5.—**MIDDLESEX (Suburban).**—General Retail and Dispensing Business, situate in healthy locality; returns between £750 and £800, at profits above the average; stock and fixtures estimated at £650; good house; very low rent; price £750, or near offer entertained.

6.—**CRYSTAL PALACE (Near).**—General Retail and Prescribing Business, with Post Office; returns approach £1,400 per annum, at usual prices; house contains six rooms; new lease will be granted; rent £50; no near opposition; price £1,150.

7.—**KENT.**—Old-established Business and Branch; combined turnover last year about £2,600; the Vendor is an elderly man, and under more energetic management the returns could be increased materially; rent at each premises £40 per annum; would sell separately if required.

8.—**NORTHERN COUNTY.**—Good-class old-established Business, returning about £6,000 per annum; gross profit £1,800; imposing corner premises; well fitted pharmacy, heavily stocked; new lease will be granted; price to include goodwill, stock and fixtures; £3,650.

9.—**CHESHIRE.**—Neglected Business; established 1899; returns last year £1,200; scope for increase; net profit 25 per cent.; large lock-up shop and store-rooms; rent £28; held on lease; price £675.

10.—**ESSEX.**—Very old-established Business, situate in rapidly-developing town; returns last year, £2,600 under management; heavy stock; large house; held on lease; further details on application.

11.—**LANCASHIRE.**—General Retail Business, with good opening for N.H.I. Dispensing and Photographic; returns average £36 per week; new lease will be granted at a rental of £40 per annum, rates £26; price £750, or near offer; Vendor retiring.

12.—**LEICESTERSHIRE.**—General Retail and Photographic Business; returns, last year, £2,000; net profit £550; single-fronted shop; house contains eight rooms; side entrance; price £1,250; Vendor would also sell the property.

13.—**EAST COAST.**—Death Vacancy.—General Retail Business; established by late owner 45 years since; returns average £1,200 per annum; single-fronted shop, well fitted and stocked; house contains 5 rooms, side entrance; price, to include freehold, which must be purchased, £1,000.

14.—**SCOTLAND.**—Very old-established Homeopathic Business, offering scope for considerable extension under energetic management; handsome mahogany fittings and good stock; in order to effect a sale the Vendor is willing to consider any reasonable offer.

Messrs. O. & Co. desire to emphasize the necessity of a periodical Statement of Account by which means alone Profit, the value of Business, &c., can be determined. Involving as this does the labour of Stocktaking and Valuation, it is often omitted and eventually becomes confusion and loss.

Valuations for Stocktaking

Messrs. O. & Co. are prepared to undertake these essential duties and make Special Terms for such service.

ORRIDGE & CO., 56 LUDGATE HILL, LONDON, E.C.4

The Association of Mnfgr. Chemists

— LIMITED —

Business Agency Transfer and Valuation Department.

Head Offices—Kimberley House, Holborn Viaduct, London, E.C.1 (and at 2 Bixteth Street, Liverpool)

PARKIN S. BOOTH, Accountant and Valuer. Phone: City 1261-2-3

BUSINESSES FOR DISPOSAL

1.—MANCHESTER SUBURB.—Old-established Business in busy suburb; well fitted and stocked; corner position; good house; on lease; returns £700-£1,000, all cash; rent £50 p.a.; let off 14s. 6d. p.w.; price for quick sale £500 all at, or nearest offer. (74)

2.—ALDERSHOT.—Old-established Herbalist and Druggists' Sundries Business; rent £94 per annum; returns £1,000 per annum; well fitted and good stock; good living accommodation; cash price for quick sale, £500. Write for further particulars and order to view. (75)

3.—BIRKENHEAD.—Old-established Family Retail and Dispensing Business; returns, about £2,000 p.a.; held on lease, 10 years to run; excellently fitted and well stocked; capable of great improvement under personal supervision; good house; strongly recommended. Write for further particulars and order to view. (49)

4.—HANWELL.—High-class Dispensing and Retail Business for quick Disposal; established 30 years; held on lease, with 16 years to run, at a rental of £75 per annum; returns average £50 per week, all cash; stock about £700; good house attached; price £1,750. Write for particulars and order. (77)

5.—LONDON, S.W.—Unique opportunity to acquire Cash Retail Dispensing Business, established over a century, situated in busy main thoroughfare; lock-up shop, with store room above; lease 13 years at £100 p.a.; returns approximately £50 per week under management; well fitted and good saleable stock carried; price for quick sale, £1,750. (38)

6.—LONDON, S.W. SUBURB.—Good-class Retail and Dispensing Business on lease, 20 years to run at £65 p.a.; returns under management £18 per week; could be considerably increased; stock, fixtures and fittings at recent valuation, £682; cash price for quick sale, £700; good reasons for disposal; specially recommended. (76)

7.—GRIMSBY.—£1,000 will be accepted for an old-established Business, freehold, taking £25 a week, all cash; house, shop, warehouse and cellar; stock amounts to approximately £200; death vacancy. Write for further particulars and order to view. (75)

8.—YORKS.—Good-class Dispensing and Retail Business, in busy town; double-fronted shop, with house attached, in main road; returns, £35 p.w., all cash; stock about £700; Kodak Agency; price £850. Further particulars on application. (71)

9.—LONDON SUBURB.—Smart up-to-date Cash Drug Stores, East Ham; main road; prominent position; new double front; mahogany fittings; returns £30 p.w., which could be doubled in qualified hands; Kodak Agency; owner, vendor, will grant 42 years' lease; specially recommended; price £1,050. (64)

10.—CHESTERFIELD.—Old-established double-fronted shop, 3 warehouses, house 6 rooms and cellars; lease can be obtained; returns, £34 per week, practically all cash; stock, £700; fixtures, fittings and goodwill, £550; price for quick sale, £1,100. (65)

11.—STOCKPORT.—Splendid opportunity to acquire a Business in main shopping thoroughfare; premises on lease; 7 years to run; rent £80, including rates; turnover £1,000 p.a., which can be considerably increased by smart man; no living accommodation; stock and fixtures about £650. (67)

12.—BRADFORD.—Retail Cash Dispensing Business, in main shopping centre; frontage of five windows; large corner shop, doing good-class business; Kodak Agency; splendidly fitted in modern style; rent high, but reasonable for position; exceptional opportunity for a go-ahead pharmacist; offered at low price as owner's time is fully occupied by business in another city. (58)

13.—LONDON, S.E.—Cash Drug Stores in busy main road, thickly populated district; turnover last year £755, all cash; could be doubled in qualified hands; no serious opposition; good living accommodation; large garden; quick sale, £500, or near offer. Write for further particulars and order to view. (66)

14.—KIMBERLEY, NOTTS.—Retail Cash Business situate in good-class neighbourhood; returns £700; rent £13 15s. and rates; all fittings, fixtures and stock new; ill-health reason for disposal. Write for further particulars. (68)

15.—NORTHUMBERLAND.—Recently established Cash Pharmacy, with Kodak Agency; average takings £14 p.w., which can be considerably increased with energetic, qualified man; lock-up shop; rent 8s. per week; house attached; price for goodwill and fixtures, £275; stock to suit purchaser; offers invited. (36)

Stocktaking and Valuation of Businesses undertaken at moderate inclusive fee. Chemists are invited to consult us in respect of their requirements in connection with sale or purchase of businesses. Chemists in the North are requested to communicate with our Liverpool Offices.

BERDOE & FISH

WILLIAM S. FISH.

VALUERS AND TRANSFER AGENTS,

41 Argyle Square, KING'S CROSS, W.C.1

(one minute from St. Pancras and King's Cross Stations).

1.—DERBYSHIRE.—Unopposed Mixed Country Retail, with Wines and Spirits; returns nearly £1,800; net profit £550; house attached; low rent; heavily stocked; owner retiring; price £1,250.

2.—SURREY (25 miles out).—Unopposed good-class Village Business, with Kodak Agency; returns, £1,150, at good prices; scope for increase; lock-up shop, well stocked; owner retiring; price £465, plus stock at valuation.

3.—HOME COUNTY (20 miles out).—Good-class Retail and Dispensing Business in growing residential town; returns last year £2,617; large house and garage; stock and fixtures worth £1,800. Applicants must have at least £2,000 at command.

4.—WEST MIDLANDS (Busy Market Town).—Good medium-class Business, with Kodak Agency; returns £1,650, under manager; good profits; scope for increase; 8 rooms and shop; prominent position; price £1,150; worth attention.

5.—ESSEX (Popular Seaside Resort).—Good-class Light Retail, with Kodak Agency; returns over £1,800, increasing; good profits; nice house and pharmacy; well stocked; price £1,300 for quick sale.

6.—KENT COAST.—Middle-class Cash Retail, in good unopposed position; returns average £21 a week; plenty of scope; low rent; long lease: house attached; stock and fixtures worth £700 to £750; price £850; worth attention.

7.—LONDON (WESTERN SUBURB).—Profitable Cash Retail; under unequalled management; present returns £10 a week; was doing £18; rent 15s. a week clear; price for quick sale £350; suit beginner; owner left trade.

STOCKTAKING VALUATIONS.

May we quote you a price for doing this important work? Stocktaking, to be of real use, should be done thoroughly, and with our experienced and expert staff we are able to guarantee this, at the same time carrying out the work quickly and without upsetting the general routine of business. We are now booking dates for September and onwards.

ESTABLISHED 1870.

Telephone: 0651 Museum.

ERNEST J. GEORGE

Chemists' Valuer and Transfer Agent.

3 ST. PAUL'S CLOSE, WALSALL.

Telephones: 774 and 1000.

London Representative:—

Mr. S. F. CLARK, 34 Marksbury Avenue, Richmond, Surrey.

CHARLES C. MARSDEN

Valuer, Transfer Agent and Stocktaker,

44 SHOLEBROKE VIEW, LEEDS.

SHEFFIELD.—£500. Nicely fitted Pharmacy, established 17 years. Working and middle-class district. Small N.H.I. Rent and Rates £68. Net profit, about £300. Small house attached. Ill health reason of sale. Plenty of scope for increase.

BRETT & CO.

All valuations have the personal attention of F. J. Brett, M.P.S.

TRANSFER AGENTS AND VALUERS.

73 LAUREL ROAD, LEICESTER. Telephone: 1934

FOR DISPOSAL

£1,300 RETURNS, YORKS.—Seaside Fashionable Resort now in full swing; good position; Light Retail and Dispensing; plenty of scope for increase; price, £900.

£2,000 RETURNS, MIDLAND CITY.—Light Retail; good house; lease or will sell freehold; price of business, £1,000.

£1,000 RETURNS, BRANCH; light Retail; Midlands; price £500.

£800 RETURNS, BRANCH, DURHAM CO.; good-class Retail, capable of being doubled by personal appearance; price £650.

Number of Buyers with cash ready in most districts.

BUSINESSES WANTED.

THOS. TOMLINSON & SON

CHEMISTS' VALUERS, TRANSFER AGENTS,
AND EXPERT STOCKTAKERS,

45a MARKET STREET, MANCHESTER.

ESTABLISHED OVER HALF A CENTURY.

Telegraphic Address: "Tomtom."

BUSINESSES FOR DISPOSAL.

BRISTOL.—Small Business for Sale; good working-class district; living accommodation; well stocked, nicely fitted, modern windows; £250 down, and balance can remain. 222/29, Office of this Paper.

DURHAM COUNTY.—An exceptional opportunity for securing a very old-established and profitable Cash Business in working-class district of large industrial town; heavily stocked; large N.H.I.; full particulars to genuine applicants; references desired and given; terms; agreed sum for goodwill, stock and fixtures at valuation. 222/5, Office of this Paper.

EAST CHESHIRE (small manufacturing town).—Old-established Business, Family, N.H.I., Veterinary, Photography; average N.H.I. 350 per month; no great opposition; good house; rent low; ill-health reason of sale. Full particulars apply 214/22, Office of this Paper.

ESSEX (on new estate).—Drug Stores; shop, double-fronted, electric light, 4 rooms, scullery and bathroom; brick-built garage and large garden; trade £15, rising; no Dispensing; price, freehold, fixtures, stock, etc., £1,300; established 20 months. P.C.B. 45/15, Office of this Paper.

LANCASHIRE Town.—Good Cash, Drug and Photographic Store; established 35 years; in thickly-populated district; good stock, fittings; electric light; good living accommodation; Kodak Agency; splendid opportunity for right person; with building, £1,200; good reason for selling. Apply 221/1, Office of this Paper.

LONDON.—Exceptional offer; well-established Light Cash Business in busy shopping centre; turnover nearly £90 weekly; good profits; Kodak Agency; modern well-fitted pharmacy; every convenience; very heavily stocked; price £4,000; only cash buyers need apply. "Owner," 89/969, Office of this Paper.

LONDON, E.—Opportunity for energetic, qualified male; at present under female management; a Lock-up Shop and room behind; great scope for increase; next but one to Post Office; good reasons for selling; within cheap "bus fare" of Bloomsbury. 220/11, Office of this Paper.

LONDON (Western Suburb).—Very attractive, good-class Light Retail and Photo (Kodak Agency), in commanding position in rapidly developing neighbourhood; returns at present over £1,400, at good prices; lock-up shop; long lease at low rent; excellent opportunity for Pharmacist with limited capital; partnership would be considered; banker's reference must accompany application. 221/21, Office of this Paper.

MANCHESTER (within two miles).—Old-established, well-fitted Pharmacy, with Photography; corner shop, in densely-populated district; with excellent living accommodation; electric light throughout; unique opportunity, with immediate sound prospects for any qualified man; price, £825 for quick disposal; owner leaving through ill-health; exceptional offer; only requires inspection. 221/7, Office of this Paper.

MIDLAND CITY.—An opportunity to acquire a real genuine business on main busy road; handsomely fitted shop, with large stock, doing £2,000, steadily increasing; should do £50 weekly this winter; N.H.I. about 4,000; Kodak Agency; long lease at very low rent; an opportunity seldom offered; books kept open to every investigation; good reason for selling; price £1,450. 222/22, Office of this Paper.

MIDDLESEX.—Chemist's Cash Business, with good living accommodation; working-class district; Kodak Agency; N.H.I. average 3,000 per annum; net profit about £250 per annum; lease nearly 8 years at £35; price £700. "Statim," 219/20, Office of this Paper.

NORTH OF ENGLAND.—An old-established Retail Business, with Wine Licence. N.H.I. and extensive shipping connection; turnover nearly £4,000 yearly; shop and warehouse at option; owner retiring owing to ill-health. Full particulars to genuine inquiries. Write 214/32, Office of this Paper.

ST. ALBANS.—Progressive little Business; small house and garden; main road; no near opposition; single-front shop, well fitted and stocked; turnover £18 weekly; price £450; lease can be had; £50 yearly, or freehold purchased. Apply 71 London Road.

SHEFFIELD.—Old-established Mixed Family Retail and Dispensing; populous neighbourhood; present hands 47 years; corner shop, with side shop for Stationery and Tobacco connected; returns £1,340; stock £640; electric light; N.H.I. 1,000; rent £64; fine opportunity for young energetic man; price for cash £1,000. Apply "Pharmacist," 50 Burngreave Road, Sheffield.

STRATFORD, E.—Chemist's Business; unique opportunity of acquiring same; situated in populous working-class neighbourhood; returning under unqualified management £15 weekly; very few patents; 15 years' lease at 12s. 6d. weekly rental; good living accommodation; golden opportunity for qualified man; splendid opening for Photography and Optics; owner will accept £200, price of stock. 219/39, Office of this Paper.

WESTCLIFF-ON-SEA.—Sound profitable Business for disposal in growing district; returns £35 week, increasing; Kodak Agency; no N.H.I.; very convenient house, in thorough repair; modern pharmacy, fully stocked; owner, going abroad, will accept £1,300; books open to investigation. Apply "Kodak," 89/968, Office of this Paper.

A SNIP.—£125 will purchase a neglected Pharmacy in a very thickly populated district of Manchester; a rare and excellent opportunity; lock-up shop and good lease; electric light; low rent; a real bargain. 219/37, Office of this Paper.

ADVERTISER, having received appointment, must sell Pharmacy immediately; will accept nearest offer to £100 for entire stock; worth much more; purchaser can either remove stock (ample time allowed), or, if he desire, continue business at low rental; advertiser is landlord; chance for single man; no fear of loss; small furnished house can also be had later if required. 221/31, Office of this Paper.

BUSINESS for disposal, including supply of best quality Perfumes, Face Powders, and Creams in bulk; automatic scale and other accessories; perfume bottles, cream jars, and other sundries; also small connection if desired; approximately £135; would separate; offers invited. S. W. Hill, 24 Gray's Inn Road, W.C.1.

CHEMIST and Druggist Business; busy South Wales town; main street; excellent position; well fitted. Full particulars apply John M. Leeder & Son, Auctioneers, Swansea.

FOR Sale, the old-established Business of Chemist and Druggist presently carried on by the Trustees of the late Mr. D. S. Gowans at 556 St. Vincent Street, Glasgow. For full particulars apply to West, Anderson & Rankin, Writers, 180 Hope Street, Glasgow.

£950.—Old-established Business, London, N.; Cash Retail, Dispensing and Photographic (N.H.I.); well fitted, electric light; long lease at low rental; excellent living accommodation; illness sole reason for disposal; full particulars at interview. 222/21, Office of this Paper.

BUSINESSES WANTED.

MESSRS. BERDOE & FISH are in immediate want of Businesses, and vendors will find it to their advantage to correspond with us, we having at the present time a large number of genuine cash buyers with from £700 to £4,000 at command, and ready to take over at once; private registers kept, and strict privacy assured. Valuation Offices: 41 Argyle Square, King's Cross, W.C.1.

SMALL Chemist's Business or Drug Store wanted, returning about £750, with house attached; unopposed village business would suit, or in small town; south or west preferred. Full particulars to "Chemist," care of Mr. Higgs, Lakeside, Station Road, Swanage, Dorset.

WANTED, Chemist's Business; London preferred; moderate rent and living accommodation; must bear investigation; a neglected business or Drug Store with plenty of scope may be considered. Please give as full details as possible, which confidence will be respected, to "Chemicus," 39 Twyford Avenue, Acton, W.3.

PREMISES FOR SALE.

CHEMIST.—Grand opening for a high-class business on handsome parade of new shops in new, popular and rapidly-growing residential district where success is assured. Fine shop with frontage of 20 ft., excellent depth, double lavatories, residential flat over; exceptional opportunity for ambitious firm or private individual. Apply Sole Agent, Leslie Raymond, E.S.I., F.A.I., Estate Offices (facing Tube Station), Golder's Green, N.W.11. Telephone, Speedwell 1601.

THORNTON HEATH (228 Brigstock Road).—Bold shop, six rooms, garage, excellent opening for chemist; freehold, £2,500, or offer. Apply, Owner, 284 Brigstock Road.

PREMISES FOR DISPOSAL.

FOR Sale or Let, three Shops with living rooms, etc.; ideal Chemist; no opposition; no premium required; main road; tram pass door; near sea; Southend. Apply Cousins, 32 Valkyrie Road, Westcliff-on-Sea.

PREMISES TO LET.

SHOP and Premises to Let, Kensington; good-class shopping centre; rent, £120 (at present upper part let off at £90 yearly); premium to include lease 14 or 21 years, also valuable shop fixtures; £650; good opening for Chemist. Apply, Leslie Marsh & Co., 31 St. Mary Abbott's Terrace, Kensington Road, W.

TO Let, Shop and House in busy thoroughfare of a Lancashire manufacturing town; been a chemist's for 30 years. 222/25, Office of this Paper.

AGENCIES.

INDIA.—Firm of Toilet Soap Makers and Perfumers, etc., shortly sending out Representative on business visit, would be glad to hear from one or two manufacturers of kindred, but non-competitive lines, willing to participate in expenses and services of experienced salesman and organiser. 89/978, Office of this Paper.

AMERICAN AGENCY.—A well-known British Proprietary House, whose Governing Director will be visiting their American Branch at an early date, are open to negotiate for the representation and sale of any first-class Pharmaceutical Preparation through their American organisation, with efficient advertising and office staff; local manufacture can be arranged if necessary; interested parties please send particulars, in confidence, by the earliest post. Write Box No. A.A., c/o Brandis-Davis Agency, Ltd., 231 Strand, London, W.C.2.

GENTLEMAN, having wide connection with Perfumery and Drug Trade, would consider the English Agency for a number of first-class makers of Drugs, Synthetics, and Essential Oils. Please give full details in first letter to 89/975, Office of this Paper.

FINANCIAL.

SALES Manager (young Chemist preferred) wanted by progressive Private Limited Company to control Agency Department, Packed Drugs and Proprietary Goods; investment of £500 required in 7½% cumulative preference shares; commencing salary £150 and share of profits. 219/40, Office of this Paper.

SITUATIONS OPEN.

RETAIL.

[HOME.]

BIRMINGHAM.—Assistant (junior, male or female) wanted for Branch; used to quick cash trade, N.H.I. and Photography. Please give full particulars and enclose photo if possible to Vernon Thompson, Chemist, 159 Stratford Road, Birmingham.

BIRMINGHAM Suburb.—Branch Manager, qualified, young and energetic, trustworthy, wanted for medium-class Dispensing and Photographic; permanency for right man. State age, experience, salary required and when at liberty to A. D. Norton, 359 Birchfield Road, Birmingham.

BRIGHTON. — Wanted at once, gentlemanly Unqualified Assistant, with London or South Coast Dispensing experience. Apply, with full particulars, age, salary, references, etc., to E. Beckwith, M.P.S., Watts & Co., 43 Dyke Road, Brighton.

CITY.—Wanted, at once, Junior; must be smart, quick Counterman, of courteous address; interview essential. Hancock & Co., Ltd., 128 Fleet Street, E.C.4.

CITY.—Qualified; good Salesman and energetic worker; age about 30; used to high-class business, and with undeniable references. Full particulars to Southons, 5 Leadenhall Street, E.C.3.

EAST LANCASHIRE.—Qualified Manager required for light Retail Business; N.H.I. and Wine and Spirit Licence; good terms, including house accommodation offered to suitable man; must have unimpeachable references. 89/981, Office of this Paper.

GRAVESEND.—Millhouse & Roberts will require on or about October 1 a Junior Assistant, under 25, who preferably has had an indentured apprenticeship; the business is good medium class. Full particulars should be sent in first instance with name and address of last two references. 20 New Road, Gravesend, Kent.

KENT.—Qualified Chemist for small company; must be active, good Dispenser, used to N.H.I. work and Counter; living accommodation; Optics and small capital advantages. Detailed particulars, wages required, photograph, and copy references to "Progress," 40 Rock Avenue, Gillingham, Kent.

LANCASHIRE.—Qualified Manager required for mixed working-class business, with N.H.I. and Prescribing; no assistant kept, so must not be afraid of a duster. State age, wage, when at liberty and references to 222/3, Office of this Paper.

LIVERPOOL DISTRICT.—Wanted, Qualified Lady Assistant, chiefly for Dispensing department; also elderly Qualified Chemist for light work. 222/16, Office of this Paper.

LONDON.—Lady (Minor) for Front Counter and Dispensing. Please state when at liberty, age, salary required, and give full details of experience in first application. 220/23, Office of this Paper.

LONDON, E.2.—Qualified Assistant; another kept; middle-class, with N.H.I.; married man; flat (four rooms) over shop provided. State salary required, give particulars of experience, names of references, age, when disengaged, letter only. "Pharmacist," 37 Sydney Road, Stoke Newington, N.16.

LONDON, N.W.—Qualified Manager for quick Dispensing, N.H.I. and private; good Counterman and Window-dresser; permanency and good scope for the right man. Apply, with full particulars of experience, etc., stating age, salary required and when at liberty, 220/34, Office of this Paper.

LONDON, N.W.—Qualified Manager, about 35 to 40, energetic, experienced, reliable and trustworthy, must be good Salesman and able to work up a business, required for new branch early October. Apply, stating experience, age, salary, and when at liberty, 216/14, Office of this Paper.

LONDON, S.W.—Required, male Dispenser with Minor qualifications; hours of work, 8.45 a.m. till 6 p.m.; Saturdays, till 1 o'clock; no Sunday or Bank Holiday duty. Write, giving full particulars of experience, to Box 142, Sells, Fleet Street, E.C.4.

LONDON, S.W.—Junior Assistant, 19 to 25, smart appearance; accustomed to all duties; accurate Dispenser essential. Give age, height, experience and salary in first letter, photo if possible (returned), to 221/6, Office of this Paper.

LONDON, W.—Smart young qualified Assistant wanted at once; good-class business; outdoors; personal interview preferred; if by letter send full particulars, salary required, etc. G. W. Evans, 239 Hammersmith Road, W.6. (near Broadway).

LONDON, W.1.—Wanted, immediately, qualified Assistant (outdoors) in high-class West-End Dispensing Pharmacy; no Photography; also well-educated and well-trained unqualified Junior (whole or part time). Full particulars, with copies of testimonials, in the first instance to 89/976, Office of this Paper.

LONDON, W.8.—Qualified Junior Assistant required by October 12; age about 21-22. Reply, stating full particulars as to experience and salary required, to Harrington, 15 Kensington High Street, London, W.8.

MANCHESTER (Near Twenty Minutes Out).—Qualified wanted for N.H.I. Dispensing and Counter; comfortable post. State full particulars. 222/24, Office of this Paper.

NEWCASTLE-UPON-TYNE.—Qualified Assistant, male, of good address, chiefly for Dispensing Counter; accustomed to high-class business. Apply, giving full particulars, experience, age, references, salary (outdoor), to Brady & Martin, Ltd., 29 Mosley Street, Newcastle-on-Tyne.

S.E. DISTRICT.—A Qualified Assistant; comfortable job for A.P.E. careful and obliging man; permanency; state salary. Apply 221/10, Office of this Paper.

THE ROYAL INFIRMARY, HUDDERSFIELD.—Wanted, Dispenser, male, with Minor qualification; temporary appointment, but may become permanent. Applications, stating salary required, with full particulars and copies of not more than three testimonials, to be addressed to the Secretary, as above.

WARWICK.—Assistant, young lady or gentleman, for good-class Dispensing and Photographic; neat and accurate Dispenser, and good Counter-hand essential. Apply, with usual particulars, Croasdale, Chemist.

WEST-END.—A thoroughly competent Assistant, with best West-End experience. In giving particulars kindly state salary required and height. Apply 221/100, Office of this Paper.

WESTMINSTER.—Experienced Assistant wanted, accustomed to first-class dispensing business. Apply, stating age, height, and full particulars of previous engagements, to H. J. Perrett, 90 Victoria Street, S.W.1.

A LOCAL gentleman wanted to assist in Stocktaking; three days or more. Smithsons Pharmacy, Preston Circus, Brighton.

A YOUNG, qualified Manager wanted for branch; good experience and credentials essential. Shields & Warren, St. Albans.

A SSISTANT; unqualified; about 21; must have had experience in busy good-class business; Dispensing, Window-dressing and Photography. Apply 89/980, Office of this Paper.

A SSISTANT for good-class Family and Dispensing Business. State age, experience, salary (outdoor). Dickinson, Stamford.

AT once, Junior Assistant for all-round Chemist's business. Send full particulars, age, height, salary, to H. R. Broad, Bristol Road, Gloucester.

GENTLEMANLY Junior Assistant, unqualified, wanted for Retail and Dispensing Business. Apply, stating experience, age, height, salary required and references, with photo (to be returned), to G. Henley, Lyme Regis, Dorset.

JUNIOR Assistant required, with experience in Dispensing and Photography (D. & P.). Courtenay, Chemist, 3 High Street, St. John's Wood, N.W.8.

JUNIOR (lady or gentleman) for good-class new business; must be courteous, of good address and possessing first-class credentials. Send full particulars, salary asked, and photo to R. Edmonds, M.P.S., Bracknell, Berks.

JUNIOR Assistant (male), aged 18-20, required for high-class Dispensing business near London. Apply, with full particulars, salary required, and when disengaged, to 220/28, Office of this Paper.

JUNIOR (male) wanted (Surrey) as soon as possible. Please state full particulars of age, experience, references and salary required to 220/19, Office of this Paper.

LADY Assistant wanted (Hall or Minor), experienced in Chemist's Retail, to take charge of Dispensing and Toilet Counter in good-class Pharmacy in Kent. Please state full particulars, salary required outdoors (accommodation recommended), to 219/21, Office of this Paper.

LADY, Junior, wanted immediately; good Saleswoman. State age, experience, salary. Stokes, Chemist, Bristol.

LADY Assistant (Hall) required immediately; must be good Dispenser, with all-round experience. Apply, stating age, salary required, experience, and when disengaged, to Superintendent, Manchester and Salford Co-operative Society, Drug Dept., 451 Stockport Road, Longsight, Manchester.

MANAGER; qualified; male; age about 30; first-class references essential; mixed business; no living accommodation; progressive; salary £5 and generous commission; commence immediately. Edward Jones, Chemist, 75 Woodbridge Road, Guildford.

MANAGER, qualified, for good-class country business (Home Counties), with knowledge of Photography, and good Salesman. State age, experience, and full particulars to 220/26, Office of this Paper.

MILLHOUSE & LINCOLN, Chemists, Northfleet, require a qualified Chemist living within easy access for duty one day per month; permanent. Apply to above, stating terms, etc.

PART-TIME Assistant (male), immediately, Monday to Friday evenings each week from 7-10, chiefly for Counter work; man with London experience if possible; might suit Pharmacy Student if sufficiently experienced. Usual particulars to G. H. Pierson, 94 Queen's Road, Bayswater, W.2.

PART-TIME Assistant required, with good Dispensing experience; married; to live in. Apply Amore & Co., 173 Sleano Street, S.W.

QUALIFIED Assistant; Bristol; middle-aged; working-class district; N.H.I. Dispensing. Full particulars, salary, etc., to 218/9, Office of this Paper.

QUALIFIED, 25 to 35 for brisk middle-class business; Kodak Agency; supervise small staff. State salary required, experience, age, height, and references to Banner's, Ltd., 266 Smithdown Lane, Liverpool.

QUALIFIED Assistant (gentleman), about 23, for Dispensing and assist at Counter. Apply, stating age, experience, salary required and full particulars, to Mr. Reid, 2 Queen Street, Exeter.

QUALIFIED Assistant wanted, October 11. Apply, with full particulars and photograph (to be returned), G. Elliott & Son, Pharmaceutical Chemists, Walsall.

QUALIFIED Manager (married) for branch in good working-class district; must be good Counterman and Prescriber, and have undeniable references; small comfortable house; at once or shortly. Sangster, Chemist, Slough, Bucks.

QUALIFIED man capable of taking charge; married or single; must be keen, active, and adaptable; Optical knowledge an advantage, not essential; good prospects to right man; good credentials necessary; living accommodation if married; at once or shortly. Sangster, Chemist, Slough.

QUALIFIED Assistant required at once to take charge of small branch; young, smart, accustomed to quick, accurate Dispensing, Counter and Photographics. Full particulars of experience, age, height, salary required (outdoors), and references to Shelley's, Ltd., Caldmere, Walsall.

QUALIFIED, reliable Assistant; abstainer; able to take charge when needed; good house attached; rent free; Photographic, N.H.I. and General Retail; permanency to right man. State salary required and copy of references, before October 20. Dennis, 101 Birchfield Road, Northampton.

QUALIFIED Assistant, gentlemanly, of good appearance, not over 30, for good-class. Apply by letter, in first instance, with salary required, references and photo to "Major," 51 Broad Street, Pendleton, Manchester.

QUALIFIED man for Central London; one wishing permanency preferred; quick trade; hours 8.30 to 7 and 1 o'clock Saturdays; good opening for right man. Please give particulars and state age and salary expected to P.C.B. 45/31, Office of this Paper.

QUALIFIED Assistant Manager wanted for Country Business, East Coast; young, energetic. Full particulars, age, salary, etc., with photo. 221/30, Office of this Paper.

QUALIFIED Manager for Branch; smart man with knowledge of Prescribing and Photographic; medium-class business, with N.H.I. State age, salary, etc., also photo (returned). Levy, 17 Roman Road, Middlesbrough.

RELIABLE young Assistant, preferably qualified, required shortly; quick and conscientious Dispenser essential. Please give full particulars of age, experience, salary, references, etc., to W. A. Wood, Pharmaceutical Chemist, 351 High Street, West Bromwich.

REQUIRED for early October, two competent, active Assistants (male) with good Dispensing knowledge. Apply, with full particulars of age, height, experience and salary required, to W. H. Hill, 357 High Street, Cheltenham.

REQUIRED immediately, Lady, with Minor qualification and good Dispensing experience. Apply, giving full particulars and salary required (outdoors), 221/2, Office of this Paper.

SENIOR qualified Assistant desirous of progress is offered an opening as Manager in London suburb; experience in good modern business essential. Send full particulars of experience, with photo if possible, to 89/979, Office of this Paper.

VACANCY for Qualified Man, single preferred, for Dispensing and General Retail. Apply, stating references, experience and salary, to "Chemist," 158 Trafalgar Road, Greenwich, London, S.E.

WANTED, immediately, lady Assistant (Hall Certificate); Counter and Dispensing. Full particulars, salary and experience, Boulwood's, 292 Ripple Road, Barking.

WANTED, October 18, qualified lady Assistant with good Dispensing experience. Apply with full particulars to Miss Brennan, 11 The Broadway, Finchley, N.3.

WANTED, qualified Assistant; outdoors; General Retail business and N.H.I. State usual particulars to Goosey & Rogers, 51 Ben Jonson Road, Stepney, E.1.

WANTED, unqualified Assistant (male) for good-class country business; usual particulars. N. G. Beck, Victoria Pharmacy, Burgess Hill, Sussex.

WANTED, Junior or Improver; male; outdoors; good Mixed Business. Apply Roberts, Chemists, Ltd., 1 Belgrave Road, Longton, Stoke-on-Trent.

WEST-END Chemist requires Part-time Student. Write for appointment. Address "A," 23 St. James Square, Holland Park, W.11. He has also room in his home, in quiet district, for Assistant or Student; every comfort. Apply Mrs. Price, at above address. Bus to Addison Avenue. Make a note of it.

WHOLESALE.

CLERK required for Buying Department of Wholesale Drug House; in addition to knowledge of routine work, must be capable of attending Drug Sales and valuing samples for purchase. Apply, stating age, previous experience, and salary required, to "X. Y. Z.," 89/973, Office of this Paper.

COMPRESSED TABLETS.—Competent Compressed Tablet Maker required by provincial firm of Wholesale Chemists; sugar coating not essential. Applicant should give full details of former experience in first letter, also state age and wages required. 215/37, Office of this Paper.

RELIABLE REPRESENTATIVE WANTED.

A GERMAN FIRM OF MANUFACTURING CHEMISTS DESIRE TO ENGAGE AN ENGLISHMAN, AGED BETWEEN 30 and 45, ON MONTHLY SALARY, WITH A VIEW TO TAKING UP THE PACKING AND DISTRIBUTION OF A NOVEL PHARMACEUTICAL PREPARATION WITHIN THE UNITED KINGDOM, ON BEHALF AND IN THE INTEREST OF THE GERMAN FACTORY. THIS ARTICLE HAS HAD FOR MANY YEARS A MOST SUCCESSFUL SALE IN GERMANY, AS WELL AS IN THE NEIGHBOURING COUNTRIES.

1. No capital is required, the necessary funds being provided by the factory.
2. Application may be made in the English language.
3. Applicant must, however, possess *some slight* initial knowledge of the German language, as several months' stay in Germany at manufacturers' expense is necessary, in order to become initiated by special training.
4. Applicant must be a Specialist in Pharmacy, preference being given to a Pharmacist, although a scientific degree is not absolutely necessary.
5. Applicant must first of all be *trustworthy* and a shrewd, energetic man of business, seeing the situation in question is independent.
6. Applicant must be well recommended and be able to furnish references.
7. Domicile in the United Kingdom is immaterial.

Apply, stating full particulars (photograph most essential), under 216/27, Office of this Paper.

EXPERIENCED Pill and Tablet Maker wanted by London Wholesale firm. Apply, giving full particulars of experience, to 89/977, Office of this Paper.

JUNIOR Assistant wanted for City Druggists' Sundries House; only applicants with some knowledge of the trade will be considered. Apply in writing, stating age, experience, and salary required Dakin Brothers, Ltd., 82 Middlesex Street, E.1.

MANUFACTURERS require Representatives to carry as a side line Powder Puffs on a commission basis only; first-class connection among Chemists, Ladies' Hairdressers and Stores essential. 217/40, Office of this Paper.

PHARMACEUTICAL LABORATORY.—Wanted, Assistant for Manufacturing Laboratory, able to make ordinary Galenical Preparations. Apply by letter, marked "Pharmaceutical," stating age, full details of experience and wage required, to Brady & Martin, Ltd., Northumberland Road, Newcastle-on-Tyne.

REPRESENTATIVES required, London and provinces, for entirely new quick seller, retailing 5s.; no competition; enormous market; only gentlemen with proved connection and sales entertained; liberal commission terms, with progression. Write only and fully, "Rep," 4 Dollis Road, London, N.3.

[COLONIAL, INDIAN AND FOREIGN.]

EASTERN AFRICA.—Qualified Pharmaceutical Chemist wanted, age about 26 to 30; three years' agreement; quarters provided; passages paid. State qualifications, age, details of experience. Send copy testimonials only. Write "N. Y.," c/o J. W. Vickers & Co., Ltd., 24 Austin Friars, E.C.2.

FRENCH RIVIERA.—Wanted, three capable Assistants, under 35, single; good Dispensers; knowledge French unnecessary. Send photo, reference and salary required to Pharmacie Cosmopolite, Monte-Carlo.

INDIA.—Chemist's Assistant required for India; must be qualified and unmarried; salary, rupees 375 monthly, with quarters or allowance; annual increment; passage paid; four years' agreement. Apply "EH/S," 90/982, Office of this Paper.

SOUTH AFRICA.—Qualified Assistant (single), age about 26, required for British Pharmacy; good-class experience essential; 3 years' agreement; second class passage paid out and home. State details of experience, and enclose copies of testimonials and photograph. Apply "M. H.," S. Maw, Son & Sons, Ltd., 7-12 Aldersgate Street, E.C.1.

LEADING firm of Wholesale Druggists have vacancy for Foreign Representative; excellent opportunity for young man with good Retail experience anxious to get on. Apply 90/983, Office of this Paper.

Price lists, trade circulars, samples, and printed matter can in no case be forwarded, the Box numbers being intended exclusively for specific answers to particular advertisements. The Publisher reserves the right to open and refuse to forward any communications received which he may consider contrary to this rule.

SITUATIONS WANTED.

RETAIL.

[HOME.]

A.A.A.—ASSISTANT, unqualified, Stock, Counter, Dispensing, Prescribing, desires part-time berth; experienced. "Aspirin," 31 Groveway, Chadwell Heath, Essex.

A.A.A.—ASSISTANT, unqualified (22), height 5 ft. 10 in., desires position with well-established London Pharmacists; good Salesman, experienced Window-dressing, manufacture of Galenicals, Dispensing, Photography; previous experience, South Coast; available November, or will wait really good post; please state salary. 220/39, Office of this Paper.

A.A.—A RELIABLE Assistant; locum, temporary or permanent; all-round experience, Dispensing, Prescribing, Salesmanship; excellent references; 36; tall; unqualified; capable of taking entire charge; London-Essex district preferred. "Locum," c/o Mr. Ashford, Pharmacist, Aylesbury, Bucks.

A CAPABLE, experienced Assistant; unqualified; London and provincial experience; 38 years; single; capable management; well up Dispensing and Counter; excellent references; free September 24. Brown, 45 London Road, Horsham.

A FULLY experienced qualified man; permanency; temporary or Locum; capable and reliable; disengaged. "Chemist," 85 Lancaster Road, Leytonstone, E.11.

A THOROUGHLY capable Assistant desires Immediate Locum or permanent engagement; unqualified. "R.," 131 Mount View Road, N.4.

"ABBOTT." 7 Quality Court, Chancery Lane, W.C.; City, West End and Hospital experience; temporary or permanent; best references; disengaged.

ABSOLUTELY trustworthy; widely experienced; Minor; recent reference from ex-examiner in Pharmacy (good-class business) states "reliable, active, courteous"; middle-aged, but healthy, of good personality, and an interested worker; salary somewhat negotiable. "A. B.," 39 Disraeli Gardens, S.W.15.

A GAIN available as Locum or emergency relief; drug house record for responsible reliability; London or suburbs. Wire or write, "Capability," 229 Sumner Road, Peckham, S.E.15.

A S Manager or Assistant; young; energetic; excellent experience and references; West Country preferred; disengaged when required. 222/23, Office of this Paper.

A S Manager or other responsible post; qualified; middle-aged; thoroughly reliable and capable; disengaged. 221/54, Office of this Paper.

ASSISTANT, age 23, unqualified, good appearance, experienced, good Window-dresser and Salesman, careful Dispenser, requires short temporary position in any capacity; at present disengaged. Apply "R. B.," 216/32, Office of this Paper.

ASSISTANT; unqualified; temporary or permanent; Dispensing, Counter, Photography; would manage Drug Store; purchase entertained; good reference. P.C.B. 45/18, Office of this Paper.

ASSISTANT, passed Part I, desires situation; London preferred. W. E. Barter, 104 Clapham Road, S.W.9.

ASSISTANT, unqualified, thoroughly experienced all branches Pharmacy, desires permanency; married. T. Windsor, 414 Kingston Road, Raynes Park, S.W.20.

ASSISTANT, age 21, desires post as Junior; 4 years' experience, Counter, Dispensing, Photography; excellent references; large town preferred. "A. L. S.," 93 Weston Road, Meir, Longton, Staffs.

ASSISTANT, unqualified, experienced, recommended, requires permanency. "S.," Retford House, Dewsbury Road, Leeds.

ASSISTANT or Locum; experienced, all-round man; 33; unqualified; highly recommended. Park, 156a Town Street, Rodley, Leeds.

ASSISTANT; unqualified; middle-aged; just left situation after 20 years; all-round knowledge, including Homeopathy and Photography. Neal, 6 Sandwell Crescent, Hampstead, N.W.6.

ASSISTANT; young; tall; London (West and City) and country experience, Dispensing, Counter, Window, D. and P.; able to take charge; Norfolk or Suffolk preferred. Scott, Mere Street, Diss.

ASSISTANT, Manager; qualified; first-class experience, Counter, Dispensing; Photographic experience; all-round, good man; full or part-time. P.C.B. 45/39, Office of this Paper.

A VAILABLE November; Assistant; young; unqualified (male); four years' experience, Retail, Dispensing, Photography, Window-dressing, etc.; preference given London. 220/390, Office of this Paper.

BIRMINGHAM.—Evening and Saturday duty wanted (throughout session Technical School); passed Part I; good references. McCoy, 85 Clarence Road, Harborne.

B.S.C., M.P.S., desires situation or Locum; young, of good appearance and address; desirous of obtaining good general Retail experience; excellent references. Simon, Ferndale, South Wales.

BRIGHTON, Hove, Worthing and District.—Experienced Pharmacist desires post; permanency or relief work, etc.; West-End and all-round experience; speaking French and German fluently. S. Humphrys, M.P.S., 20 Norman Road, Hove, Sussex.

BRISTOL OR DISTRICT.—Qualified (25) requires good position; good references. Smith, 41 Balmoral Road, St. Andrews, Bristol.

CHEMIST, qualified (Scotsman), seeks post as Manager or Assistant; excellent references. 220/40, Office of this Paper.

DISENGAGED October 3; qualified Chemist; London experienced; permanency or Locum. "Minor," 92 Mortimer Street, Herne Bay.

DISPENSER, 40; quick and accurate; used to N.H.I.; thoroughly competent; able to manage; excellent Salesman (languages); free November; interview Town next week. Write "K. M.," 4a Harvey Road, Boscombe, Bournemouth.

DRUG STORE.—Advertiser post as Manager, with view to early succession; good all-round experience; London. P.C.B. 45/38, Office of this Paper.

EAST-END Hospital Dispenser, tired of working at break-neck speed, would welcome offer of fresh work; present post nearly seven years. Miss Serbia, 64 Elfindale Road, S.E.24.

EXPERIENCED, qualified Manager or Assistant, 26, tall, reliable, energetic, good Salesman, desires permanency. "Aspirin," 16 Stockwell Park Road, S.W.9.

EXPERIENCED lady Dispenser requires post with Doctor as Dispenser and Book-keeper, or as Assistant to Chemist; 5 years' good all-round experience; willing to work good progressive post; excellent reference; Watford, Berkhamsted, Tring or near district essential. 221/15, Office of this Paper.

JUNIOR, just out of time, 20, 5 ft. 11 in., smart appearance; Counter, Dispensing, Photographic, and Window-dressing; used to busy shop; excellent reference; preferably Sheffield or district, Nottingham, Bradford or Northern city. 219/18, Office of this Paper.

JUNIOR Assistant; thoroughly competent, rapid, accurate Dispensing, Counterwork, Photography, Window-dressing; excellent experiences. Myers, 84 Brynbyfyd, Ferndale, Glamorgan.

JUNIOR, first-class experience, Harrogate and West End, requires situation, City or South Coast; good appearance and address; Photographic; excellent references. Stanley Mote, 33 St. George's Road, Harrogate.

JUNIOR Assistant seeks position in good-class Light Retail Pharmacy; Liverpool, Manchester, or North Wales districts preferred; permanency required; salary £2 10s.; good references; willing; conscientious. Griffiths, Plasnewydd, Ruabon, near Wrexham, North Wales.

LADY Dispenser (Hall) requires post with Doctor or Chemist; 18 months' experience. A. Goodchild, Knights Hill, Cockfield, Suffolk.

LADY Assistant, qualified, seeks position with Doctor, Chemist or Institution; first-class experience; highest references. Apply 216/11, Office of this Paper.

LADY Dispenser (Hall) requires post, Doctor, Hospital, Institution; 2 years' experience; London preferred. Allanson, "Cavana," Abbey View Road, St. Albans, Herts.

LADY desires post; 6 years' Counter experience (no dispensing). M. Hoddinott, 2 Harder's Road, Peckham, S.E.15.

LADY; qualified; disengaged October 18; Devon or Somerset preferred; all-round experience. "W. M.," 54 Viceroy Road, S.W.8.

LADY Dispenser (Hall) urgently requires position, South London district; likes hard work with reasonable hours. 221/25, Office of this Paper.

LADY, M.P.S., 24, desires change; good experience, Counter, Dispensing; excellent references; capable of taking charge; outdoors. 221/35, Office of this Paper.

LEEDS.—A.P.S., 10 years' experience of Counter, Dispensing (Private, N.H.I.), Buying, Books, etc., wishes return native city; present post 5 years; disengaged on request. Wells, High Street, Wincanton.

LIVE Wire.—Qualified, desires post as Manager; splendid Window-dresser, capable Dispenser, and a first-class Salesman; just the man you want. 219/22, Office of this Paper.

LOCUM; qualified; London or near; disengaged September 27. Phone until Saturday night, Waltham Cross 471. Letters "E.," 10 West Park Road, Kew.

LOCUM at liberty from 27th; recently given up business; abstainer; all-round experience; town or country. Carte, 156 Town Street, Rodley, Leeds.

MANAGER; qualified; energetic; West-End and provincial experience; disengaged October 18; interest in business considered; accept locum work till suited. "Pharmacist," c/o Clissold, 25 Caepstow Place, London, W.

MANAGER or Senior; permanency; age 48; thoroughly experienced; trustworthy and accurate; good references; London district. Taylor, 30 Agnew Road, S.E.23.

MANAGER or Locum; qualified; middle-aged; disengaged; good references and address; interview if desired. Owens, 6 Eccleston Street, S.W.1.

MANAGER; qualified; 31; married; sound experience West-End pharmacies; tall; energetic; business builder; interest in business considered; disengaged shortly. 221/3, Office of this Paper.

M.P.S., F.R.O.A., F.S.M.C., desires Managership; permanency; Coast preferred; married; 33; varied experience both branches. All particulars, c/o 11 Westland Road, Watford, Herts.

M.P.S. (woman), Hospital-trained, good Dispensing experience, excellent references, disengaged. 219/19, Office of this Paper.

M.P.S., F.S.M.C., aged 32 years, requires post where energy and initiative will be appreciated; wide and varied experience in Buying, Optics, Pharmacy, etc. 221/13, Office of this Paper.

PART-TIME.—Part II Student, residing in West-End, desires post in West-End Friday evening and Saturday afternoon and evening. Natan Zamet, 32a Rupert Street, W.1.

PART-TIME Assistant; unqualified (male); quick, accurate Dispenser; free October 4; S.W. preferred. "Wakeford," 75 Aurelia Road, Croydon.

PERMANENCY; thoroughly competent all branches; 5 years' indentured apprenticeship; salary £3 weekly. "Statim," "Blenheim," Chinnor Road, Thame, Oxon.

PHARMACIST, fully Qualified, middle-aged, exceptional all-round experience, married, abstainer, seeks responsible management, with living accommodation preferred; highest credentials and references; permanency. "Luminal," 219/38, Office of this Paper.

PHARMACIST-OPTICIAN (F.S.M.C.), 46, offers services as Manager in about one month; responsible post desired. 220/36, Office of this Paper.

QUALIFIED, 29, tall; trustworthy, conscientious; good all-round experience, London and provincial; highest references; abstainer, married. M. C., 219/28, Office of this Paper.

QUALIFIED, tall, energetic, has had good experience, wants to settle down; one who would make his employer's interests his own; City permanency preferred. 218/10, Office of this Paper.

QUALIFIED, 37, desires Managership; good-class London business; highest references. "Pharmacist," 4 St. Andrew's Mansions, Lower Clapton Road, E.5.

QUALIFIED Assistant desires post; Dispensing and Counter experience; excellent testimonials; energetic; anywhere in Wales; Welsh speaking. "Aspirin," Llanfair T.H., Abergelle, N. Wales.

QUALIFIED Locum or Relief; Optics, Photography; reliable; abstainer. "Chemist," 97 Southwark Park Road, S.E.16.

QUALIFIED; Manager, Senior; permanency; many years' varied experience, London and provincial; N.H.I., Prescriber, Photography; quick; accurate; married; accommodation advantage. "Pharmacist," 220/17, Office of this Paper.

QUALIFIED Locum or temporary Manager; varied experience; disengaged September 26. Kirton, 5 The Exchange, London Road, Thornton Heath.

QUALIFIED, energetic, 27, desires post as Manager or Assistant; London preferred; disengaged October 1. 221/14, Office of this Paper.

SOUTH-WEST OF ENGLAND.—Qualified, experienced, energetic desires permanency as Manager or Senior; highest references. 222/6, Office of this Paper.

STUDENT would like employment full Saturdays; London district; full experience; any capacity. Apply "Male," 80 Newland, Northampton.

UNQUALIFIED Assistant seeks permanency; 6 years' experience; disengaged in one month; Brighton or district preferred, not essential. 216/8, Office of this Paper.

YOUNG unqualified desires position; advertiser has all-round experience, Window-dressing, Counter, Dispensing, everything Photographic; South Coast preferred. 222/2, Office of this Paper.

WHOLESALE.

A.A.A.—CAPABLE, energetic young man (22), who has had four years' experience of Retail Pharmacy, wishes to get in touch with a well-known Wholesale House with a view to obtaining a post as Representative; applicant can be free November 1, or will wait any reasonable time in order to obtain a good post; will be pleased to arrange an interview at any time. "Xsel," 215/36, Office of this Paper.

SHOWCASES

UPRIGHT CENTRE CASES, WALL CASES,
GLASS COUNTERS, MIRRORS
WINDOW FITTINGS, GLASS SHELVES,
SHOW STANDS, DRAWERS, DESKS
CHECK TILLS, &c. Immense Stock.
NEW and SECOND-HAND.

Ready for Immediate Delivery. For Sale or Hire.

FREDERICK MAUND

175/9 Old St., LONDON, E.C.1.

All Unqualified Assistants, Dispensers and Apprentices
should join at once

THE NATIONAL UNION OF DRUG & CHEMICAL WORKERS
(Incorporating the National Association of Chemists' Assistants)

BENEFITS: Trade Protection—Legal Aid—Unemployment
Benefit—Free Use of Employment Bureau
Write for particulars:—ARTHUR J. GILLIAN, Gen. Sec.
149 Newington Causeway, LONDON, S.E.1

ADVERTISER, with initiative and organising powers, requires position as Works Manager or similar with Toilet Manufacturers; years experience in Perfumery and Toilet Preparations with large firm. 213/36, Office of this Paper.

ADVERTISER, sound knowledge Therapeutics, Dispensing and literary ability, wishes to join Wholesale House advertising or selling staff. "G.", 219/16, Office of this Paper.

CHEMIST wishes to represent first-class Wholesale House; good connection, London and North of England; at present engaged. "Qualified," 221/22, Office of this Paper.

EXPERIENCED Representative, disengaged, excellent connection North of England, Medical men, Chemists and Institutions, medical training, of good address and well received, the best of references, is open to represent first-class house. "Fortis," 222/11, Office of this Paper.

EXPERIENCED business gentleman, disengaged, 27 years Drug Trade, wishes to represent good house or Proprietary, N.E. Coast; own car. Please write 222/13, Office of this Paper.

MAN aged 19, had 4 years in Laboratory of Soap and Perfumery Manufacturer; good worker. L. Gatehouse, 5 Brettell Street, London, S.E.17.

QUALIFIED Chemist, married, age 25 years, requires position as Representative in Midlands. Mason, 113 Standhill Road, Nottingham.

PHARMACIST requires position; eight years' experience in Sales and Medical Propaganda; highest credentials. 89/974, Office of this Paper.

REPRESENTATIVE, with excellent connection amongst Chemists in London and suburbs, wishes to meet with firm (Proprietaries, Toilet Preparations or Brushes) where his experience and ability will be of service. P.C.B. 45/33, Office of this Paper.

TRAVELLER desires change; fifteen years' sound connection from Derby to the Border and North Wales; good commissions not objected to. A. B. 603, 3 Wine Office Court, London, E.C.4.

TRAVELLER desires change; first-class experience with Chemists, Medical and Proprietaries; excellent references. Apply 222/12, Office of this Paper.

YOUNG man (24), seven years' Analytical experience with provincial Wholesale House, desires post; any capacity. Cross, 22 Ryland Street, Stratford-on-Avon.

YOUNG, keen Representative (30), with sound Chemist, Druggist and Stores' connection in Nottinghamshire, Derbyshire, Leicestershire, and Lincolnshire, is open to represent progressive House; own coupé car; good selling record and first-class credentials. Please write BM/BBRB, London, W.C.1.

YOUTH, 19, willing, desires situation (Wholesale); at present porter in retail business. Challis, 63 Moye Street, Haggerston, E.2.

[COLONIAL, INDIAN AND FOREIGN.]

RIVIERA.—Intelligent, well-educated young lady, qualified, wishes an engagement for the season. Ayrtton, Saunders & Co., Ltd., Wholesale Druggists, Liverpool.

AYRTON-GRAHAM, Ltd.

Designers and actual manufacturers of

FITTINGS

For the MODERN PHARMACY.

Shop Fronts, Show Cases, Exhibition Cases, Counter Cases, Counters, Wall Cases, Glass Signs, etc., etc.

PHARMACIES MODERNISED.

ALL GOODS OF BEST QUALITY
AND FINISH AT LOWEST RATES.

Competent Fitters sent to all parts.

106 DUKE STREET, LIVERPOOL

MISCELLANEOUS.

10s. for 60 words; 1s. for every additional 10 words or less.

AN exceptional opportunity occurs to acquire the complete Fittings and Stock of a Pharmacy, opened May, 1926; fittings (mahogany), recess labelled jars and rounds cost £340, stock cost £240; all new; at present a going concern; may be viewed any time by appointment; offers invited. B. Simpson, 52 Draper Street, Leicester.

LIMITED COMPANIES REGISTERED.

—I have now been engaged in this work over 20 years, so you may rely that my experience in Chemist and other Companies (I take all trades) is hard to beat. Most reasonable and inclusive fee. Advice free.—A. B. SLACK, 15 Christ Church Avenue, West Didsbury, Manchester.

MAHOGANY Wallcase, 6 ft. long, £20; 6-ft. Dispensing Screen, £21; Perfume Case and Desk, 90s.; 4-ft. Counter Drawers, 90s., 5-ft. Plate-glass Counter Case, 90s.; 10-ft. Glass-fronted Serving Counter, £17; 12-ft. Mahogany Drug Fitting, £27; large stock of Showcases, Shopfittings, Counters, Dispensing Screens, Silent Salesman, Countercases, Shoprounds, Counter Drawers, etc., at lowest prices. PERCY R. E. JOSEPHS, 232/8 Bishopsgate (first floor), London, E.C.2 (only address). Phone: Avenue 1194.

SECOND-HAND CHEMISTS' FITTINGS.—We have an exceptionally fine selection of these in all sizes; prices are right, and goods are in first-class condition; we shall be pleased to supply particulars and prices. Call or write, RUDDUCK & CO., 262 Old Street, London, E.C.2.

SECOND-HAND Shop Fronts, Drug Fittings, cheap; also Glass Counters, Dispensing Screens, Silent Salesman Showcases, Glass Shelves for window display. 8 ft. long x 7 ft. 6 in. high x 10 in. deep on bottom and 7 in. deep on top part Chemist Wall Showcases; three in stock at very reasonable price. A. FARLEY & CO., 227 Old Street, E.C.2.

£70.—We have just fitted a complete Pharmacy for this small sum. Let us have the size of your shop and quote you with our ideas. Send your difficulties, and have the benefit of our hundred years' experience. PHILIP JOSEPHS & SONS, LTD., 93 Old Street, London, E.C.1.

EXCHANGE COLUMN.

FOR DISPOSAL.

SIX PAIRS plated Dental Forceps; nearly new; reasonable offer. Hine, Chemist, Beaminster.

THREE PEAR-SHAPED CARBOYS on Pedestals with Stands, two Specie Jars. Particulars from, offers to, MacFarlane & Son, Chemists, Fort-William, Inverness-shire.

OFFERS WANTED for complete Set of Dental Forceps, etc. (Maw's), including 15 Forceps, 6 Probes, Mirror, etc. Maynard, Chemist, Horncastle.

WANTED.

PRESSARY MOULD, 2 dr.; good condition. Roberts, 171 High Street, Acton, W.3.

CHEMIST'S LAMP, height about 4 ft. to 5 ft.; bull's-eye type. J. W. Douglas, Ltd., 164 Lambeth Walk, S.E.

GOWER, Chemists' Bookseller, 41 Voltaire Road, Clapham, wants Pharmaceutical Books and Students' Requisites.

CANOPY ROLL-TOP DENTIST'S CABINET, also Optical Trial Case. Full particulars and price to Chisholm, 42 Woodlands Road, Glasgow.

Stimulating preparations— used externally

Of all the various types that are offered none gives greater satisfaction than the compound here presented under the old-fashioned and unassuming title

HOUSEHOLD EMBROCACTION

A perfect and permanent combination of oil of turpentine, methyl salicylate and acetic acid, emulsified with fresh eggs.

Apart from domestic uses, this embrocation is a very popular favourite among those who are liable to overstrained muscles in the more vigorous sports of Autumn and Winter.



Packed in plug-stoppered, wide mouth flats, lithographed labels and cartons in colours as illustrated.

3 oz. size,
7/-
per dozen.

6 oz. size,
9/9
per dozen.

It is readily and completely absorbed, therefore cleanly in use. By its thick, creamy consistency it is readily confined to the desired area. Preliminary treatment is unnecessary. Its lubricating properties constitute a valuable aid to massage. Action may be controlled within wide limits, without risk of blistering.

Our output has increased TENFOLD in the past few seasons, and, having installed new plant, we can quote attractive terms for quantity in bulk.

WRIGHT, LAYMAN & UMNEY
SOUTHWARK LIMITED, LONDON, S.E.1



XMAS DISPLAYS

London and many provincial customers are familiar with our handsome Show Room at 81 Brompton Road, London, S.W.3., where our products are displayed under ideal conditions.

For the benefit of provincial customers we have arranged a number of displays at important centres throughout the country and buyers are strongly advised to visit these displays to place their Xmas orders.

A considerable number of new highly successful articles will be shown and buyers will be able to make their choice under the best possible conditions.

The following displays have been arranged :

BIRMINGHAM—THE QUEEN'S HOTEL, Sept. 27 to Oct. 1 inclusive.

NOTTINGHAM—THE VICTORIA STATION HOTEL, Oct. 11 to Oct. 13 inclusive.

LEICESTER—To be arranged.

GLASGOW—GRAND HOTEL, CHARING CROSS, Sept. 20 to Oct. 1 inclusive.

EDINBURGH—THE GEORGE HOTEL, GEORGE STREET, Oct. 4 to 9 inclusive.

CARDIFF—PARK HOTEL, Oct. 11 to 15 inclusive.

BRISTOL—GRAND HOTEL, Oct. 18 to 22 inclusive.

BOURNFMOUTH—GRAND HOTEL, Oct. 25 to 29 inclusive.

BELFAST — KENSINGTON HOTEL, COLLEGE SQUARE EAST, Oct. 18 to 22 inclusive.

Our usual representatives for the various territories will be in attendance.

